Chemical Week

October 10, 1953

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Animal feed supplements may solve molasses surplus, create hefty nitrogen market . . . p. 70

NICB speakers turn the spotlight on management's upcoming key problem: selling . . . . . p. 80

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Chemical Week

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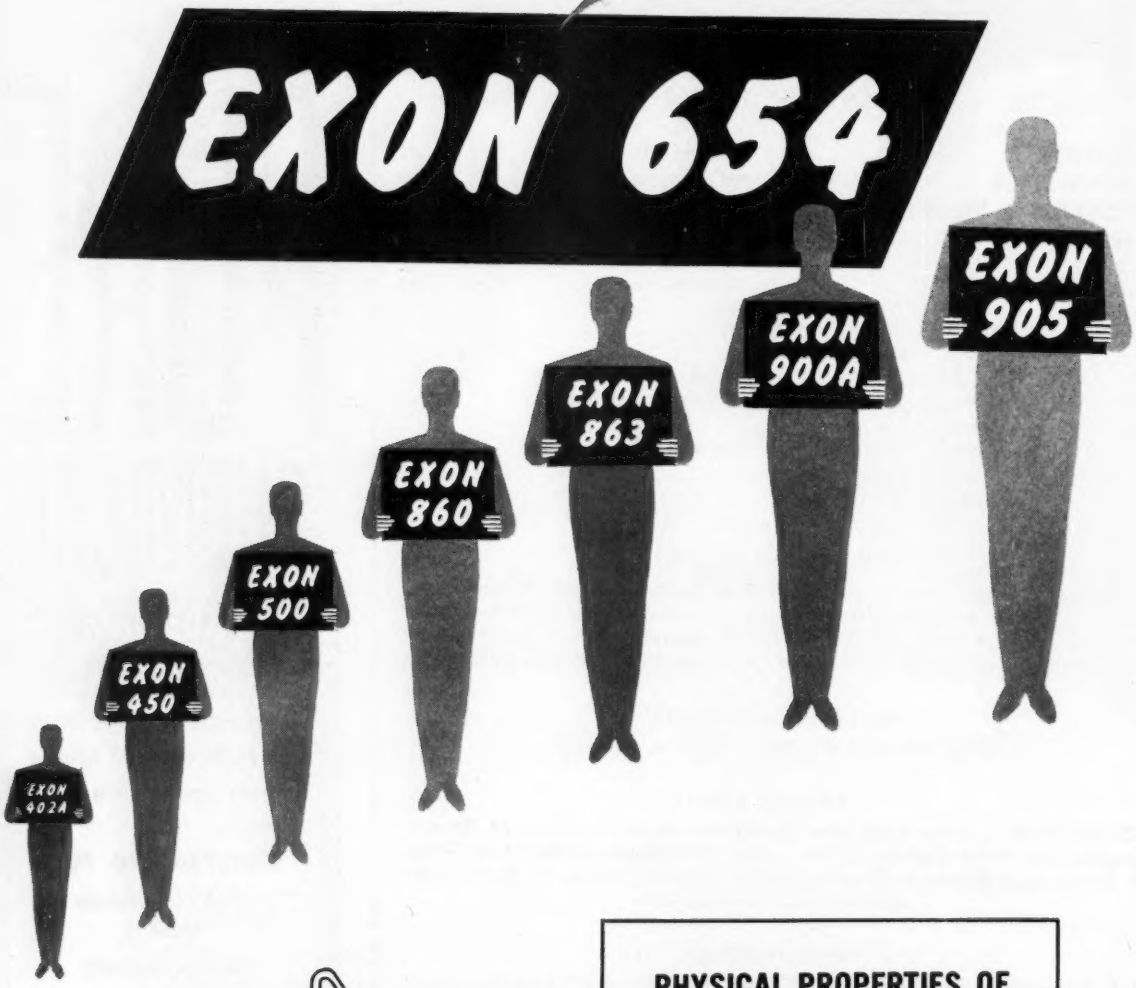

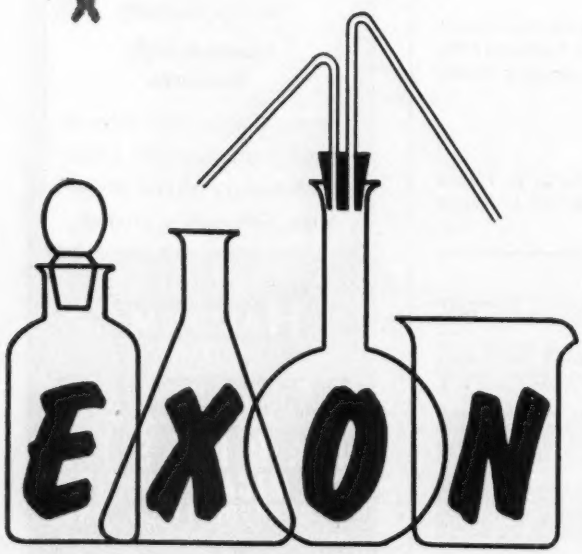

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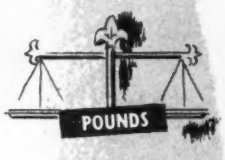

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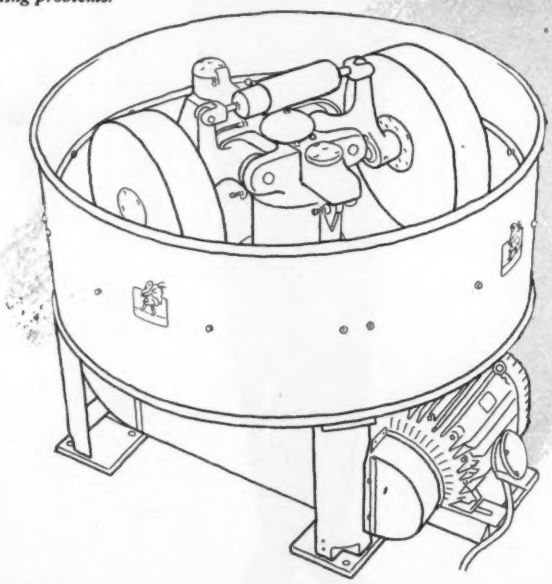

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OPINION . . . . . .

Drier Soundness

To THE EDITOR: . . . You did an excellent job on the news article about our research, "New Dimension for Driers" (*Sept. 26*) . . . Not only was it interestingly written but it was also technically sound in all respects . . .

Since I have seen so many stories about our research treated so poorly, I am quite thoroughly impressed . . .

A. C. ZETTLEMOYER
Prof. of Physical Chemistry
Lehigh University
Bethlehem, Pa.

Not All Modern

To THE EDITOR: . . . There are some things that I like about your magazine and there are some things that I don't. I shan't, however, dwell on either . . . mainly because I feel that most of my dislikes are matters of personal taste . . . even as my likes may be, too.

Nonetheless, one thing that I do like is the fact that you are forthright . . . you don't try to gloss over the unpleasant or less-than-pleasant with sweet or smooth words. Your recent editorial is a case in point . . . and that is what prompts me to write to you . . .

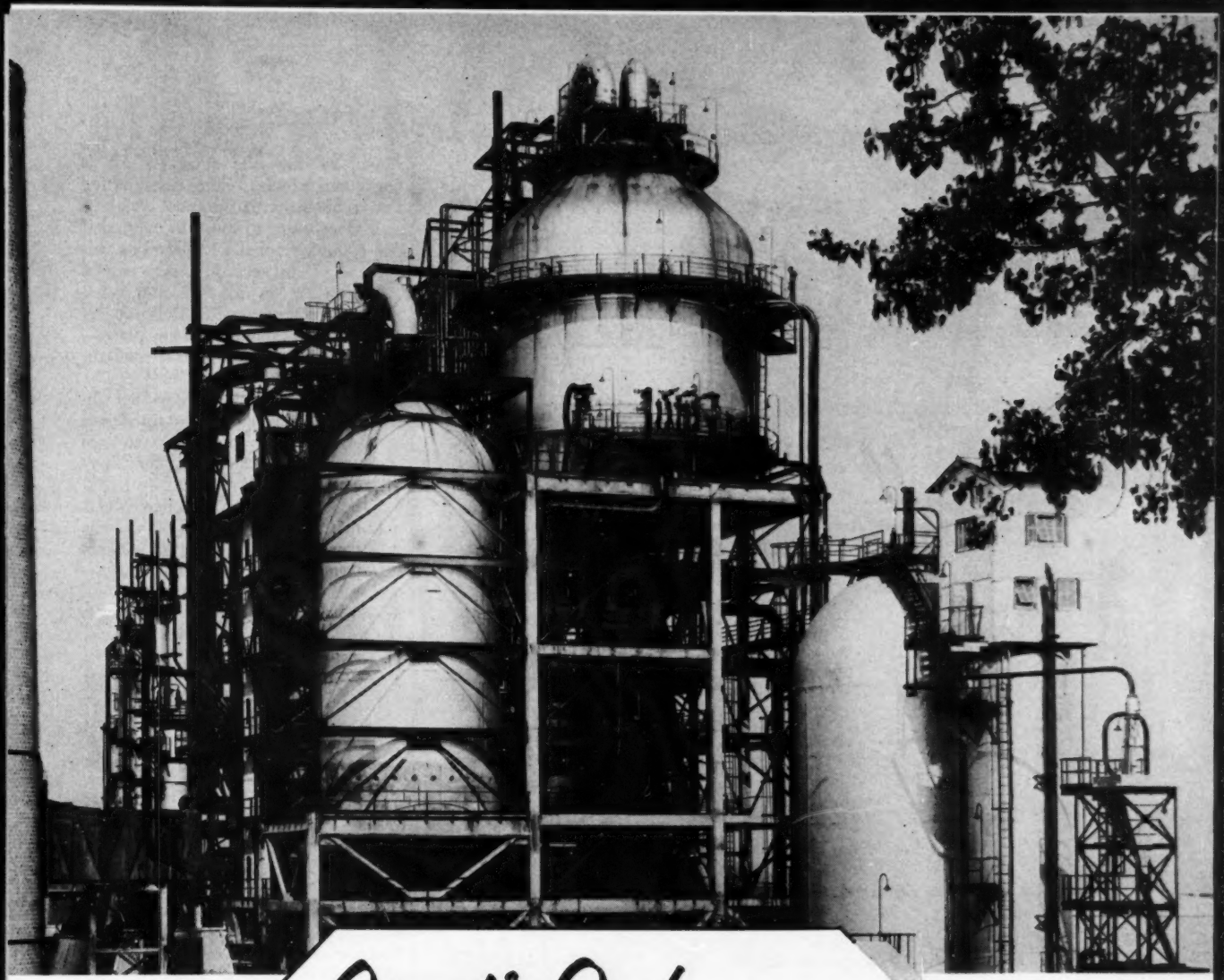
In viewing the business prospects you did not follow the popular practice and view everything with rose-colored glasses and suggest that . . . everything in the garden is bound to be rosy because American productivity is great and glorious and American salesmen are the best in the world. Nor did you view things dismally—as also is popular practice—and shriek that doom impends, that trouble will abound . . . .

Your views, in my opinion, were calm and well-balanced. You neither tried to avoid what had to be said nor did you try to overglamorize the prospects . . .

Your mention of capital expenditures—and the part they play in sustaining prosperity — impressed me. Perhaps you might have noted that capital expenditures and business activity are very closely related. If one is up, so is the other. If one goes

CW welcomes expressions of opinion from readers. The only requirements: that they be pertinent, as brief as possible.

Address all correspondence to: W. A. Jordan, Chemical Week, 330 W. 42nd St., New York 36, N.Y.



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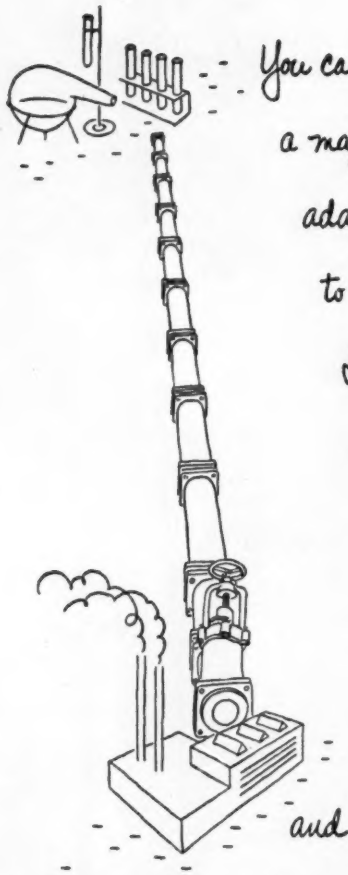

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OPINION . . . . . .

down, so does the other. Which is cause and which is effect is something that economists battle about . . .

It does seem to me, however, that not enough emphasis is placed on this subject often enough. And, capital expenditures, as far as I and economists are concerned, doesn't just mean money spent for new plants—it also means money spent to modernize facilities . . .

If anyone mentions American industry, most people conjure up visions of hundreds of slick, ultramodern plants . . . If they do, they just haven't been around . . .

There are modern, efficient plants ... but there are still lots of archaic, inefficient ones. Millions of dollars could be spent on many of the latter—and if it were, our productivity could be raised . . . And that, after all, is the real goal . . . the real key to prosperity . . .

Again, may I commend you on your forthrightness . . .

Ross L. McCaudrey
Houston, Tex.

BHA, NDGA

To the Editor: . . . Your news article, "Four Dubbed Safe" (*July 11*), is hardly in accordance with our views and with the facts as we interpret them . . .

Our chief objection . . . stems from the last two paragraphs . . . Because our interpretation was completely divergent from yours, we have re-examined Research Summary No. 1. from the Southern Regional Research Laboratory . . . and written to Dr. L. F. Martin, Head, Sugarcane Products Division, SRRL, for further clarification of his work . . . His reply states:

"We did not carry out our tests in a manner that would determine the relative cost or effectiveness of using individual antioxidants. A number of antioxidants as well as BHA and NDGA gave complete protection for the entire 24-week test period . . .

"They were used at the maximum permissible concentrations and protection for longer periods of time at the high temperature of storage was not deemed of practical importance.

"It may be possible to use less of one antioxidant than another to obtain the required protection . . . but we do not plan to undertake such rating experiments . . .

"It has been our experience . . . that except for relatively insignificant (volume-wise) specialty uses, NDGA has been supplanted by . . . propyl gallate . . . which is more eco-

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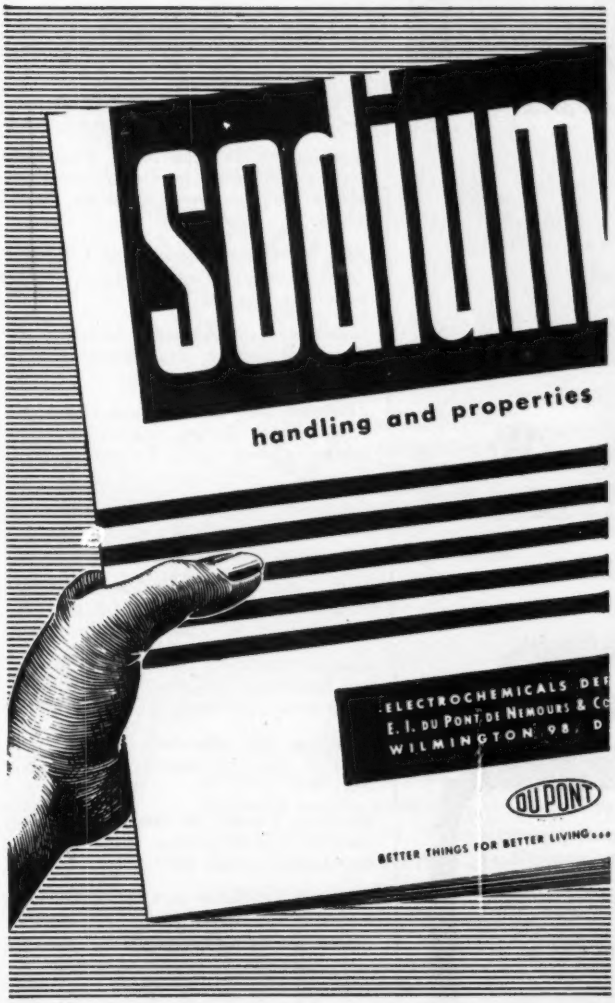

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OPINION . . . . . .

nomical . . . and butylated hydroxyanisole, which is also more economical and offers a number of superior properties . . ."

A. E. HOFFMAN
Products Dept.
Universal Oil Products Co.
Des Plaines, Ill.

Right. We should not have used the word "efficiency" in interpreting SRRL's work on the "effectiveness" of individual antioxidants.—ED.

DATES AHEAD

American Coke and Coal Chemicals Inst., annual meeting, Greenbrier hotel, White Sulphur Springs, W.Va., Oct. 12-13.

Assn. of Official Agricultural Chemists, annual meeting, Shoreham hotel, Washington, D. C., Oct. 12-14.

Commercial Chemical Development Assn., fall meeting, Hotel Kenmore, Boston, Mass., Oct. 15.

American Inst. of Chemical Engineers, South Texas Section, annual technical session, Galvez hotel, Galveston, Tex., Oct. 16.

Salesmen's Assn. of American Chemical Industry, chemical sales clinic, Commodore hotel, New York, N. Y., Oct. 19-20.

Natl. Paint, Varnish and Lacquer Assn., annual meeting, Chalfonte-Haddon Hall, Atlantic City, N. J., Oct. 26-28.

Assn. of Consulting Chemists and Chemical Engineers, annual meeting, Belmont Plaza hotel, New York, N. Y., Oct. 27.

American Oil Chemists Society, fall meeting, Sherman hotel, Chicago, Ill., Nov. 2-4.

American Council of Commercial Laboratories, annual meeting, Sheraton-Cadillac hotel, Detroit, Mich., Nov. 4-7.

American Petroleum Inst., annual meeting, Conrad Hilton hotel and Palmer House, Chicago, Ill., Nov. 9-12.

Chemical Institute of Canada, 5th Canadian high polymer forum, London Library and Museum, London, Ont., Nov. 19-20.

Manufacturing Chemists Assn., midyear meeting, Waldorf-Astoria hotel, New York, N. Y., Nov. 24.

Chemicals Industries Exposition, Commercial Museum and Convention Hall, Philadelphia, Pa., Nov. 30-Dec. 6.

Chemical Specialties Manufacturers Assn., annual meeting, Mayflower hotel, Washington, D. C., Dec. 6-8.

American Chemical Society, regional meeting, Jung hotel, New Orleans, La., Dec. 10-12.

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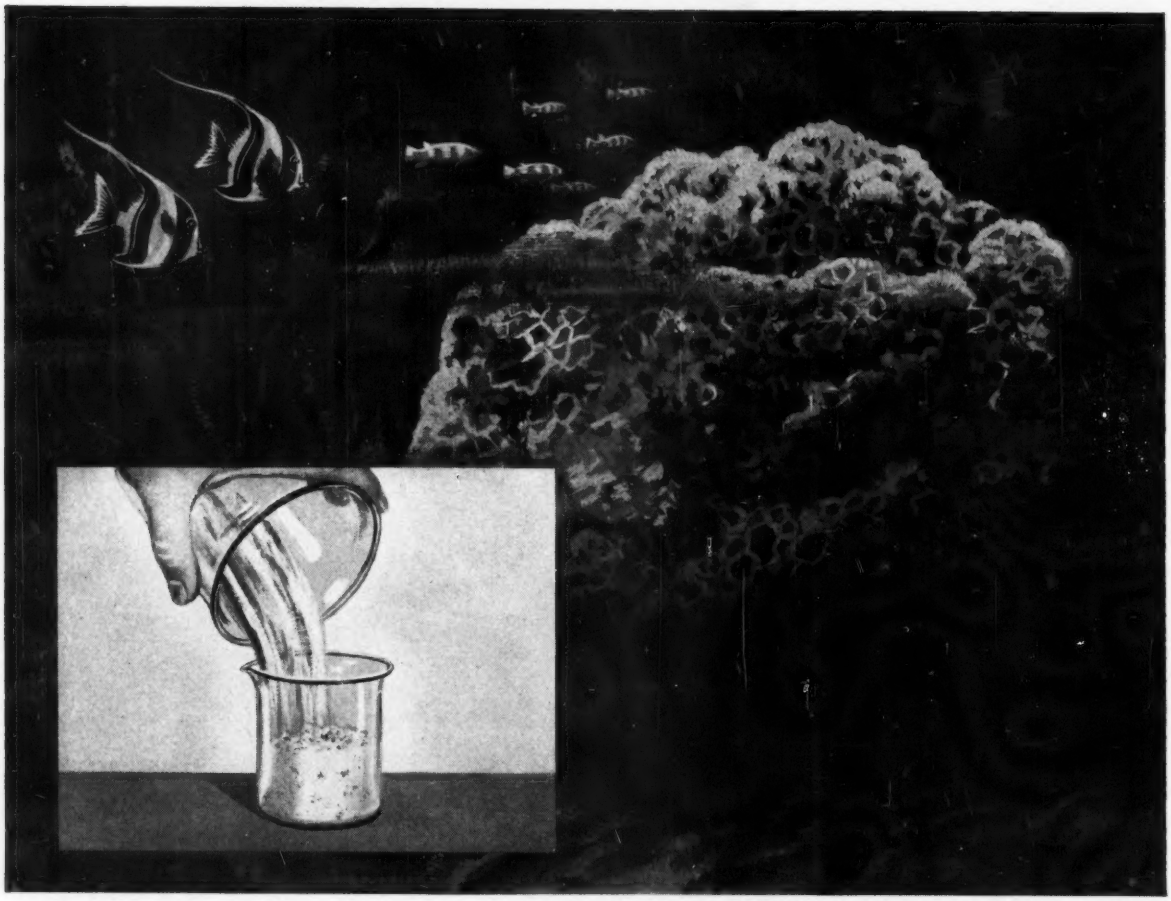

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NEWSLETTER

The rumor-sensitive New York Stock Exchange responded mightily last week to reports—unfounded on fact—that Heyden Chemical was about to consummate a merger. Price of its common stock shot up over 30%.

To damp these gyrations, Heyden called a special directors' meeting, broke the news before it intended to that its antibiotic research division had discovered a new broad-spectrum antibiotic produced by fermentation. Until last week the company expected to disclose its development at the government-sponsored Antibiotic Symposium in Washington late this month. Clinical trials are just now getting under way.

The new product is similar to, and may be, tetracycline, which Lederle and Pfizer have synthesized (*CW Newsletter, Oct. 3*) by hydrogenating chlortetracycline (Aureomycin).

•

Another new—and far different—product will get its initial advertising push next month. It's Shell's VPI (for vapor-phase inhibitor) in aerosol form. Protective Coatings Corp. (Chicago) is bringing out the rustproofer, heretofore available only in impregnated paper, as Kerpro.

The big potential market is industry—one diesel engine maker estimates his needs at 100,000 cans (12 oz. each) a year. But the company isn't overlooking the retail market—power tool hobbyists, owners of outboard motors, lawnmowers, fishing tackle, guns, etc. Sporting goods stores are a likely outlet. Price per single 12-oz. can: $2.25. A six-ouncer will probably be turned out for retail sale.

•

There's no doubt about it: U. S. businessmen—and that includes the chemical industry—are turning their eyes away from production, fixing their gaze hard on distribution, which they see as their top problem in the foreseeable future.

This shift has undoubtedly been accelerated by the publication of "The Standards We Raise," by businessman Paul Mazur, a Lehman Bros. partner who sees a shift of emphasis from production to consumption as the key to economic progress: "Maintenance and necessary growth of employment opportunities . . . will depend upon more and more intensive development of our sales markets . . ."

Already the National Industrial Conference Board has sponsored a conference on selling (see p. 80); and now the New York Section of the American Chemical Society will present a lecture series on chemical marketing. Too, in an allied field the National Lubricating Grease Institute, which describes its meetings as "characterized in the past by strictly technical subjects", will also take a look at distribution at its annual meeting later this month.

•

Finding reasons for this about-face isn't difficult. The same National Industrial Conference Board queried 159 manufacturing companies on the adequacy of industrial production capacity. Three out of four said capacity and demand are now substantially in balance; another

17% reported overcapacity; and only 7% said they require more capacity for their major lines than now exists.

In harmony with these findings are the same companies' capital spending programs. Two-fifths of them are investing more this year than last; a third are laying out less; the rest report little change. But next year's a different story: almost half (46%) of the firms plan to spend less; only 14% will spend more; the remaining two-fifths see little change.

•

Omens of this readjustment in thinking are already popping up. Dow Chemical this week confirmed the fact that it will lay off some employees at Freeport, Tex., where the firm produces several chemicals as well as magnesium (much of which goes into military airframes). General Manager A. P. Beutel says "some production units now turning out more than can be sold may be closed temporarily." But significantly there's no retrenchment of the company's expansion and research program.

Earlier, some 30 employees of Neches Butane Products were laid off because of high inventories and a strike against a principal customer; and about 400 production workers were furloughed at the Hoosier Ordnance Plant, operated by Goodyear.

•

Government spending for defense may well, however, prop business during the next few years more than was expected some short weeks ago. Coincident with the concern expressed last week to President Eisenhower by Arthur Flemming, Office of Defense Mobilization boss, over the Soviet Union's H-bomb striking power, General Services Administration extended for two years its domestic small lot purchase program.

This phase of the government's stockpiling program will now run until July 1, 1958; it covers such items as tungsten, manganese, mica, asbestos and columbium-tantalum ores. Tonnages bought so far—at premium prices from small domestic mines—fall far short of the original goals.

•

And the Atomic Energy Commission this week set up some new regulations significant to firms that buy or sell radioactive materials. The changes all have to do with general licenses.

More significantly, AEC was the target recently of criticism relating to production of the number-one radioactive material—uranium. Santa Fe Railway's William Tilton, Jr., contended that "nothing out of the ordinary has been done to provide a favorable tax climate for uranium mining." He also said AEC's $35,000 maximum bonus for discovery of mineable uranium ores is actually smaller because of federal income taxes.

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A good bit of uranium is now being thrown away. Fertilizer makers were told in Washington last week that they should consult with AEC before they build any more phosphate plants. Uranium is being recovered (since Sept. '52) from commercial phosphate rock, but no attempt is made to recover either phosphate or uranium values from the so-called "leached zone" layer of rock that overlies commercial deposits. AEC now has process studies under way, hopes for commercial use by 1956.

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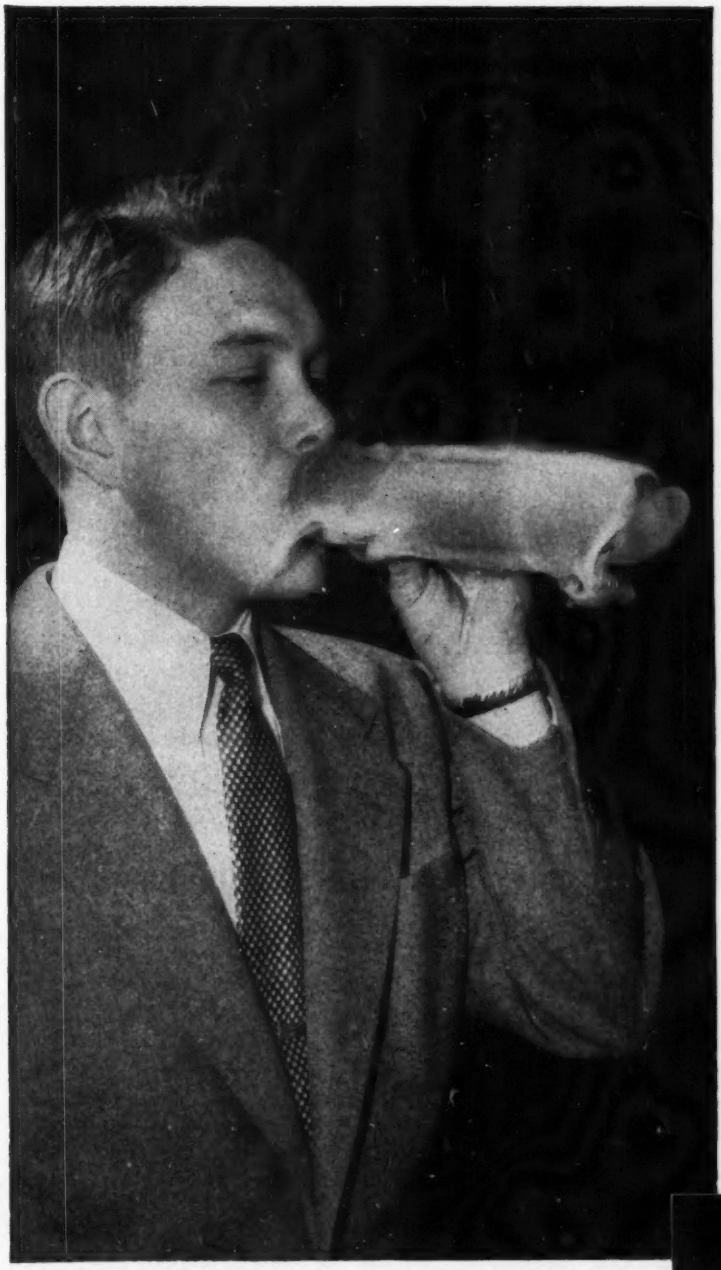
Something else you'll hear more about: the government is worried about industrial concentration in relatively few target areas. Chemical industry men have initiated studies, have submitted to the Dept. of Commerce proposals for maintaining production after an atomic bomb attack.

. . . The Editors



SMOKE BLOWN THROUGH a Norton ALUNDUM* *seamless* tube escapes throughout the tube's entire area. Such a tube gives most efficient filtration and ease of cleaning by back washing. When selecting tubes for your specific application be sure they embody this important feature.

*Trade-Mark Reg. U. S. Pat. Off. and Foreign Countries

Why Norton seamless tubes give you better filtration

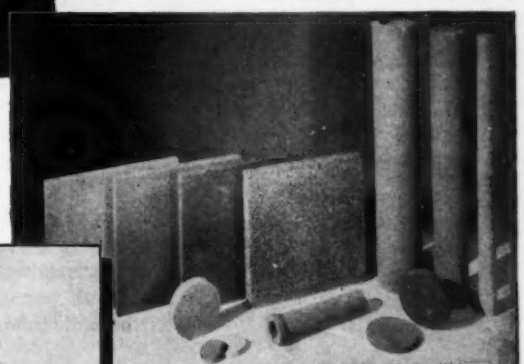
Only Norton ALUNDUM tubes have the seamless construction that means more uniform filtration and enables faster, more thorough cleaning. And like all Norton porous mediums they're made with the patented *controlled structure* process that assures even distribution of pores — in the size and open-pore ratio that best meets your needs.

Cost-cutters over a wide job range

In any form, Norton porous mediums have exceptional resistance to breakage, chipping and acid and alkaline conditions. They're designed to perform better, last longer and cut your operating costs in a wide variety of chemical field applications. For example: filtering water or solvents . . . cutting oils, wine and other liquids . . . reclaiming cleaning fluids and industrial waste . . . in boiler feed water treatment.

Get the whole story

See your Norton Representative for complete facts on how you can get more savings and satisfaction with Norton porous mediums. Or write describing your requirements, to NORTON COMPANY, 550 New Bond St., Worcester 6, Mass. *Canadian Representative:* A. P. Green Fire Brick Co., Ltd., Toronto, Ontario.



NORTON ALUNDUM POROUS MEDIUMS are available as tubes, plates and discs in a wide range of sizes.

NORTON

POROUS MEDIUMS

Making better products to make other products better

NORTON COMPANY, WORCESTER 6, MASSACHUSETTS

R. L. MURRAY, president of Hooker, is a former National Singles tennis champion. He started with the company as research chemical engineer in 1916 and has come up through the ranks of engineering and development.

BJARNE KLAUSSEN, whose paintings have been featured in LIFE Magazine, is executive vice-president. Norwegian born and a graduate of the University of Oslo, he joined Hooker as research chemist in 1916.

J. H. BABCOCK, development and research vice-president, has also been with the company since 1916. He is one of those rare persons in whom are combined a keen technical mind and a jovial personality, which are a constant inspiration to his staff.

Pfaudler standard glassed steel reactors have basic application in chemical plants the world over.

Creative engineering . . . in chemistry and equipment

THIS GROUP, which includes Hooker operations, engineering, development and purchasing men, is discussing equipment for a chlorinating process with Pfaudler representative E. N. Fox (standing at right of easel). They are (left to right) W. B. Scott, H. B. Young, P. N. Maclaren, O. Adams, J. E. Beanblossom, F. L. Bryant, D. E. Springer, Chief Engineer, (standing at left of easel), R. W. Lyke, Fox, P. D. Bosso, N. Hinckley and J. D. Sweeny.

This management team streamlines development and engineering at HOOKER ELECTROCHEMICAL CO.

A $30,000,000 expansion program was recently announced by the Hooker Electrochemical Co. of Niagara Falls, N. Y.

Construction of a large caustic soda-chlorine plant in Montague, Michigan, organization of a subsidiary company in Canada, broader research for development of new products and increased capacity of existing facilities are all included in the project. Such an ambitious program is bound to put a heavy load on the men who must develop, organize and manage it.

But the management team at Hooker is meeting the challenge head-on. A training program aimed at filling new executive positions from within is already in operation. A modernization program to step up efficiency of all plants is nearing completion. At the same time, new research developments are being put into commercial production and the company is extending its search for still other new products.

Hooker's growth is an outstanding example of the tremendous progress being made in the chemical industry today. The expansive spirit of companies like Hooker offers a constant challenge to process equipment builders like Pfaudler. And Hooker realizes the value of working closely with their suppliers' engineering groups. This has helped them to quickly translate many Pfaudler developments and improvements into increased production at lower cost.

If you are in the chemical, drug, brewery, food, or other process industries and have an equipment problem of any kind, the chances are that Pfaudler's process engineers can help you solve it. Ask for Bulletin 894-E-10.

The PFAUDLER CO., Rochester 3, New York

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Classless Compensation

Just as Papa is in a touchy spot when he carves the turkey and apportions the drumsticks and wings, so directors of chemical and other "growth" companies are right in the middle when they sit down to figure how to distribute earnings that have been increased through efficient use of modern equipment.

For harassed company officials who've been looking for answers to the arguments as to whether the choicest cuts should go to stockholders, management or labor, the Twentieth Century Fund (New York) is publishing an economic treatise (*CW Newsletter, Oct. 3*) that sets forth what might be a harmonious solution for that old dilemma. Its essence: don't play favorites.

A special defense of this kind may be needed this year by corporate directors, particularly in view of pressure being generated by labor unions in their drive for wage increases based on rises in productivity. Corporations have been resisting that pressure by relying on counter-arguments advanced by spokesmen for stockholders and management.

Neutral Navigator: In "Employment and Wages in the United States," author-economist Wladimir Woytinsky, as a noncombatant observer, suggests a way to pilot the corporate treasury safely between the rocks and shoals of partisanship. He starts out by citing figures on how national income has paralleled the rapidly mounting use of mechanical energy in industry, reaches the conclusion that "The real foundation of greater productivity is in the steady accumulation of technical knowledge."

Hence, says Woytinsky, labor as a class has no special claim to the fruits of increasing productivity because generally the effect of greater mechanization has been to reduce the demands on the worker for physical effort and mental concentration.

Management, he continues, would be derelict in its duties if it failed to obtain new and improved equipment as needed, and therefore, as a class "should not be entitled to special treatment simply because it does its proper job." Similarly for capital, Woytinsky reasons: it's expected that in a free economy the rate of return will be sufficient to attract capital, and "no special benefit should accrue to the individuals who make capital available, simply because this capital is used to implement newer productive methods."

Payoff on Performance: Instead of trying to allot productivity bounty on the basis of any class-interest dogma, the author proposes that companies should mete out boons bearing some relationship to each individual's actions or contributions. These benefits may be considered as reward for past performances or incentive for future accomplishments.

AUTHOR WOYTINSKY: For new productivity profits, a 3-way split.

Actually, Woytinsky admits, there's nothing new about this principle; it just hasn't been emphasized so much during recent years in which people have tended toward such group action as collective bargaining.

All three of the major chemical labor unions declare that one of their prime objectives is to win ever-higher wages for their members, and this push has prompted spokesmen for other groups to speak up in self-defense. A plug for benefits to investors ("those who deny themselves in order to acquire tools") recently appeared in one chemical company's employees' magazine; and another large chemical firm explains that its generous bonus system for management members "was based solely on business judgment . . . and would benefit the stockholders."

Improvement Impetus: Labor union economists don't take issue with Woytinsky's approach, but contend that there are vital reasons supporting the union's current demands for "productivity wage hikes." One of these is that higher productivity means increased production, which would result in surpluses and shutdowns unless workers' buying power were boosted so that consumption would keep in step with production.

Secondly, union leaders take credit for providing much of the impetus for industrial modernization. "By maintaining a constant upward pressure on wage levels, our trade unions have forced employers to make those improvements in methods, techniques and equipment that lead to higher productivity, in order to hold down unit labor costs and to maintain profits."

On one point, Woytinsky and the industrial trinity of capital, management and labor are in general agreement: they all want pie-sharing agreements to be arrived at through unrestrained, uncoerced bargaining, rather than by doctrinaire formula. This preference for nonregulated dickering is marked, even though bargaining under the free enterprise system sometimes leads to considerable din when—as John L. Lewis recently phrased it—"the welkin rings with the noises that emanate from our conferences when we enthusiastically disagree upon some subject."

No Nap for the Cop

That the Republican-manned Dept. of Justice is not going to turn its back on enforcement of business law is signified in its first action in the McKesson & Robbins price-fixing suit, which had been launched by the Democratic predecessors of the GOP Justice lineup (*CW, June 7, '52*).

In this case, the government charged that McKesson & Robbins' price maintenance (fair trade) contracts with other drug wholesaling companies were in violation of the Sher-

man antitrust law, which forbids minimum price agreements between wholesalers who compete against each other.

M&R thrust back by denying any violation of the antitrust act, and by contending that enactment of the McGuire fair-trade law July 14, '52, made the lawsuit academic. Specifically, M&R said that only a small proportion of McKesson-branded products were being sold through other wholesaling companies, and that the fair-trade resale price maintenance contracts were not between competing companies but between manufacturer and wholesalers.

Upon filing of that reply, this lawsuit lay dormant for one year minus three days while the cast of characters in Washington underwent the big revamping. It appeared that this case had been forgotten or pigeonholed, but last week Justice's antitrust lawyer Richard B. O'Donnell ambled into U. S. District Court in lower Manhattan with a document designed to propel the suit toward a trial.

Seeking more exact information on which the case could be tried, O'Donnell has propounded 20 questions to be answered by McKesson & Robbins. Examples: What was total dollar volume of 1951-52 sales of McKesson products to other wholesalers, and dollar volume of sales to wholesalers that competed with M&R in sale of such products?

Besides showing that the new Republican cop isn't sleeping on his beat, this latest move by the antitrust division calls attention to some fair-trade law uncertainties, clearing up of which would be welcomed by consumer-goods manufacturers who'd like to be surer of just where they stand.

Cash Compromise

Apparently deciding that it's more fun to make plastics than it is to carry on strike hostilities, both sides gracefully gave ground last week to end the walkout that had kept American Cyanamid's Selden plant at Bridgeville, Pa., idle for nearly six months.

The approximately 600 members of Local 12052, United Mine Workers District 50, had struck last April demanding a 10¢ wage increase, while management had offered rises ranging from 1 to 3¢. The figure finally settled on: 6¢/hour. This comes on top of a 7¢ increase that went into effect as of last Nov. 1. In a 55% turnout, workers voted 201-126 to accept.

Full-scale production, says Cyanamid, is at least a month away.

Additives in the Arena

Now at last, those of us who want so desperately to do something about the slow poisoning of the American people by chemicals can *do something.*

> *You will find [the Delaney bills] say simply that a manufacturer of food or cosmetics should be forced to prove that any chemicals added to his products are not harmful to human beings, before he is allowed to use them. It seems little enough to ask, doesn't it?*

Get permission to speak to your PTA, grange, club or church group . . . Make a collection of grocery labels that contain the names of chemicals and explain that these chemicals are added to foods without the manufacturer having to prove that they are harmless to human beings. Ask the members of your audience whether they want to go on eating quantities of chemicals that may or may not be doing them untold harm. Urge them to write to their congressman.

> *Write Letters to the Editor of your local paper. Most editors are delighted to receive letters and happy to publish them . . . From the samples we have received of Letters to the Editor on the subject of fluoridation we know that* Prevention *readers are quite accomplished at this kind of thing.*

Now is our chance—the first chance we've had—to do something constructive about chemicals in foods and cosmetics! Let's do a good job! Let's show the chemical companies that we will not be human guinea pigs any longer!

So wrote pro-natural food, pro-organic gardening J. I. Rodale in his magazine *Prevention*. It was one of many signs that the winter battle over food additives, cosmetic chemicals and pesticides has already been started. Too, it poses the question as to what chemical concerns are doing—and can do—to present their case to the public.

And the picture of accomplishments is spotty. There is still no agreement, even between the food and chemical industries, on the advisability or need for a position to which all manufacturers concerned with food production and processing could subscribe.

The primary hindrance to reaching such agreement is the subject's emotional nature. Despite the fact that no chemical manufacturer is conspiring to keep nutritional food away from the public, the impression has gained wide credence. Loaded phrases such as "150 million guinea pigs" overbalance in publics mind the realization that (1) chemists' diets aren't different from the public's, and (2) no company would risk its reputation on an inadequately tested product.

Look to Legislation: Chemical manufacturers can look ahead to the next session of Congress when, almost without doubt, new legislation will be enacted:

Up for consideration will be bills on three main subjects: pesticides, cosmetic chemicals, and intentional food additives. Each is unique, but perhaps the future course on additives will set the pattern, since the issues appear to be the most clearly drawn.

The basic point on food additives is this: Should the 1938 Food, Drug & Cosmetic Act be amended to put additives under a new-drug type of procedure, i.e., one that would require prior approval by the Food and Drug Administration before the material could be marketed?

The position of FDA is that the lack of such coverage is a gap in protection for the consumer. The oft-quoted standard by which FDA would judge such products:

- "Any chemical that is proposed for use ought to be approved in advance of distribution in the food product to be utterly and completely without the possibility of human injury."

The philosophy behind this is certainly echoed by both food and chemical industries, but the chemical industry, faced with having to live up to such testing requirements, feels they are impossible. The vice-dean of the University of Michigan medical school put it this way: "No competent pharmacologist, toxicologist or clinician will undertake to guarantee that no risk is present in making available a new chemical for widespread distribution."

Some testing standards would be completely impractical. Nitrogen trichloride flour bleach was used for 25 years (providing perhaps 2.5 billion man-years of tests) with injury to man not even conjectured. "What conceivable type of evidence," the

dean asks, "could a pharmacologist or a clinician present 'in advance of distribution in a food product to be utterly and completely without the possibility of human injury'?"

For their part, many food interests echo the comment of Swift's Roy Newton that any deviation from what FDA feels it needs to cope with additives "will lead to a disaster that, in addition to the harmful effect on public health, will undermine public confidence in the food industry and particularly in the chemical industry."

Hence, the pleas of the chemical industry that FDA proposals would be unduly restrictive—and its thoughts on suitable alternative legislation—have fallen on almost-deaf ears.

Better Atmosphere: Many Washington industry observers believe, now that the long-vaunted businessman government is here, that this is the time to press for law modifications. Certainly, they say, the atmosphere in Washington is a good deal more sympathetic to legitimate business requests for changes in legislation than it has been for many years.

But where top government officials might be ready to listen to a plea from a united industry, the lack of a single plan would handicap any efforts.

Thus, such organizations as MCA's chemicals-in-foods committee are searching for some middle ground that would satisfy both chemical producers and the majority of food companies. Chance that such a proposal would become basis for legislation would be a good deal better than any points made by the chemical—or food—industry alone.

The MCA committee, which held its first fall meeting last week, has instructed its legal subgroup to investigate all possibilities. Whether there is some happy medium between opposing viewpoints is still to be seen.

Mutual Effort: But while legislative unity is still nebulous, there is a chance that some cooperative effort may come. The committee, which prepared a draft of a booklet for public distribution on the whole chemicals-in-foods situation, submitted it to many leaders in the food industry in the hopes that theirs could be a publication that reflected the views of both chemical and food interests.

Comments and criticisms of those queried are now being collated for use in revising the draft.

This publication is one of the first real efforts at a joint statement of principles. The sponsors hope to have it published by winter, though the amount of necessary cross-checking consumes a great deal of time.

Certainly, there is no food industry group comparable to the chemical committee that would be available for consultation not only on the booklet, but also on matters of policy affecting both industries.

At present, what cooperation there is comes from unofficial liaison, and, to a limited extent so far, through the National Research Council's Food Protection Committee.

One of its prime projects is a survey of exactly what additives are used in foods. It has drawn up a list of approximately 70 processed foods that make up about nine-tenths of all food consumed, and has asked food companies to give it information on the additives used in preparing such materials. It plans future publication of such a list as a guide for chemical and food companies.

The primary objectives of the NRC group, however, do not include the presentation of material to the general public, to attempt to counter the idea that the chemical industry is an evil octopus intent on undermining the quality of food. Any group dedicated to such objectives would have to be above single-company or single-industry level, since competitive squabbles within the food and chemical indus-

Ounce of Prevention

AIMED AT preventing a recurrence of the kind of smog disaster that took 19 lives at Donora, Pa., in 1948, a state-wide smog warning service is being set up by Pennsylvania's State Health Dept. Dr. Joseph Shilen, director of the department's Bureau of Industrial Hygiene, explains that mobile laboratory trucks (*above*) have been gathering data about prevailing winds and other atmospheric conditions throughout the state. Another year will be required for competion of this part of the job. Then the division, using official weather reports, will be able to predict in advance the build-up of conditions similar to those that led to a concentration of smoke and fumes in Donora's cup-like valley five years ago. In that tragedy, fumes were collecting for five days before the first death resulted. Now, Dr. Shilen says, authorities will know about such a situation on the first day, and, if necessary, chemical and other industrial plants in the locality will be ordered to curtail or cease their operations until the dangerous weather conditions pass. He reports that Pennsylvania manufacturers, wanting to cooperate with the department and hoping to avoid any sudden shutdowns, are making good progress in installation of air pollution control equipment.

stries are generally blamed for much of the antichemical lore in public minds. (A maker of shortenings, for example, condemns synthetic emulsifiers, but his comments—directed only to breadmakers—are circulated to a wide segment of the public by the food faddists.)

There have been many suggestions of an interindustry foundation or council Such names as Pure Food Institute, Nutritional Educational Foundation, American Diet Forum and National Foundation of Food Technology have been proposed.

At present, only one has materialized from the nebulous stage. This is the Council on Nutrition Education, brainchild of New York public relations man Charles Bonner. This group, which formerly used the name American Diet Forum, is envisioned as a nonprofit foundation for dissemination of nutritional information to the public. Its backers would be individual companies in food and such related fields as chemicals plus groups such as the American Meat Institute, with similar objectives in a field of smaller scope.

As yet, Bonner feels his group is not yet ready for public debut, but he hopes it can start work by spring.

Would this type of organization be what is needed to counter the exaggerated claims of the food faddists? Potentially, yes. Whether it could actually accomplish this would depend on the diversity of its backers and the ability to agree on a forceful, unified program of cooperative action.

Artisans' Assist

With cooperation from union labor, another major plastics unit has passed into the possession of a chemical company that supplies the necessary resin and plasticizer intermediates. Purchaser is Allied Chemical & Dye, seller is Libbey-Owens-Ford Glass Co., property changing hands in a straight-cash transaction is the $51-million Plaskon Div., Toledo, O.

For Allied's Barrett Div., into which Plaskon will be merged, the acquisition will mean rounding out Barrett's present line of synthetic resins and plasticizers with Plaskon's wide range of plastic molding compounds and resins, mostly derived from urea-formaldehyde bases. For Plaskon, the switch in allegiance will mean assured logistic support from Allied's strapping organization—supply, finance, research, engineering. And for L-O-F, the sale means a pocketful of coin that can be used to progress with glass, its major product. (L-O-F gained controlling interest of Plaskon by buying blocks of stock in 1940 and 1943 from Toledo Scale Mfg. Co.)

Allied waited until it had reached agreement with the union representing Plason employees before handing the check to L-O-F. John D. Biggers, L-O-F board chairman, said the "mutually advantageous" deal was helped along by the willingness of Local 12, United Auto Workers (CIO), to accept contract changes that put this labor pact on the same footing with other chemical union agreements. In exchange for added benefits in vacation and medical insurance terms, the workers agreed to give up their premium pay for holidays and weekends when those days are within regularly scheduled work weeks.

Plaskon, with 595 production workers and about 100 other employees, has two facilities in Toledo. Administration offices and glue factory are on Sylvan Ave., while the 40-acre Glendale Ave. site is used for production of molding compounds, coating resins and alkyd molding compounds, also has a pilot plant.

EXPANSION . . .

Thiourea: North American Cyanamid Ltd., Welland, Canada, has gone into production of thiourea, an intermediate for silver dip-cleaning solutions. Calcium cyanamide—basic raw material for the product—is obtained from Cyanamid's Niagara Falls plant.

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Synthetic Resins: Pancoat Milling, Inc., has started production of synthetic resins, casein glue, powdered metals at New Orleans, La. Special feature of the plant: an air-cleaning division, equipped to clean materials by controlled air methods.

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Alcohols: Archer-Daniels-Midland has broken ground for its $8-million plant at Ashtabula, O., designed to convert linseed, soy beans and marine oils into fatty alcohols. By-products planned: caustic soda, glycerine. Production is slated for late 1954.

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Phosphorus Chlorides: Victor Chemical Works, Chicago, Ill., is starting work on a new plant, adjacent to its present units at Morrisville, Pa., that will more than double the company's present capacity of phosphorus oxychloride and phosphorus trichloride. Present plans call for completion of construction some time early next year.

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Pyridine: Ansul Chemical Co.'s synthetic pyridine plant (*CW Newsletter, Sept. 20, '52*) is scheduled to start up at Marinette, Wis., by Nov. 1. Early estimates of output: several hundred thousand pounds of refined pyridine, other co-products. Chief market: the pharmaceutical industry.

COMPANIES. . . .

Air Products, Inc., Allentown, Pa. has leased two 2,500 cu. ft./hour high-purity oxygen generators to the Owens-Illinois Glass Co. to be installed at that company's Libbey Div. plant, Toledo, O.

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Mississippi Chemical Corp., Yazoo City, Miss., is arranging to borrow over $4 million from the New Orleans Bank for Cooperatives on 4½% promissory notes due in installments until Dec. 31, 1958. Major portions of the money gained will be earmarked to pay off a Reconstruction Finance Corp. loan and to finance plant expansion.

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Du Pont Co.'s Niagara Falls plant will undergo a $1-million construction program, including erection of a new office building and warehouse storage units. No completion date for the work has been ventured.

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New company incorporations:

- Salt Lake Chemical Co. has filed a charter of incorporation with the secretary of state's office, Dover, Del. No capital stock is authorized.
- United Chemical Corp. has been formed in Milwaukee, Wis., with an authorized capital stock of 100 shares of common at no par value.

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United Dye & Chemical Corp., Belleville, N. J., has retained Blair Holdings Corp. as financial consultants, giving up stock purchase options as partial recompense for services it will receive. Also involved in the deal: election of two Blair officers to the chemical firm's board and executive committee.

Further angling for entree into chemicals, Blair Holdings is the company presently negotiating with Interhandel for the purchase of General Aniline & Film Corp. (*CW, Aug. 29*), if and when the Alien Property Custodian decides that the company should be returned to private ownership.

•

Union Carbide and Carbon Corp., New York, has bought a tract of land outside Charlotte, N.C., will build a $75,000 plant for operation by Durane Gas Co., Carbide's distributor in the area. Storage capacity: 30,000 gal. of gas. Construction will start within a few weeks.

announcing

a change in name

To more aptly relate our corporate name to the ever-growing field which we have served through the years, and to more readily identify the scope of our products and service, we have changed our name.

Needless to say, only the name has been changed, and we hope the new name will come to symbolize the same high standard of quality that has characterized the old throughout the industry.

NEVILLE

PRODUCTS OF TOMORROW
FROM THE CHEMICALS OF TODAY

C6

NEVILLE CHEMICAL CO.

PITTSBURGH 25, PA.

Plants at Neville Island, Pa., and Anaheim, Cal.

What's Happened to DPA Ammonia Certificates of Necessity?

Company	Plant Location	Amount		Percent	
		Original	Amended	Original	Amended
	COMMITTED				
Allied	Hopewell, Va.	$6,000,000	$7,000,000	85	85
Allied	South Point, O.	6,130,000	8,000,000	85	85
Atlantic Refining	Point Breeze, Pa.	3,400,000	5,443,000	50	40
Commercial Solvents*	Sterlington, La.	20,458,000	20,458,000	50	50
Deere & Co.	Pryor, Okla.	18,500,000	18,500,000	45	45
Dow	Freeport, Tex.	4,316,800	4,316,800	50	50
Hooker	Tacoma, Wash.	1,894,700	1,894,700	50	50
Lion Oil	New Orleans, La.	30,452,000	30,045,000	50	50
Lion Oil	Eldorado, Ark.	260,065	260,065	55	55
Mathieson	Lake Charles, La.	1,358,238	2,129,311	50	50
Northern Chemical Industries	Sandy Pt., Maine	6,600,000	6,600,000	45	45
Mississippi Chemical	Yazoo City, Miss.	2,858,550	2,858,550	45	45
Mississippi Chemical	Yazoo City, Miss.	5,704,707	5,704,707	50	50
Pennsalt	Wyandotte, Mich.	2,400,000	2,400,000	50	50
Phillips Chemical	Houston, Tex.	38,260,000	28,676,700	50	50
Shell Chemical	Ventura Calif.	6,789,000	7,600,000	50	50
Spencer	Vicksburg, Miss.	13,758,000	13,758,000	50	50
	UNDECIDED				
Filtrol	Vernon, Calif.	3,715,908	?	55	?
Union Oil	Wilmington, Calif.	5,000,000	?	45	?
	CANCELLED				
Cities Service	St. Louis, Mo.	5,000,000	SURRENDERED OCT. 1952		
Diamond Alkali	Houston, Tex.	1,606,000	SURRENDERED OCT. 1951		
Diamond Alkali	Painesville, O.	828,900	SURRENDERED APRIL 1952		
Food Machinery	S. Charleston, W. Va.	2,503,000	SURRENDERED JULY 1952		
Woodward Iron	Woodward, Ala.	6,000,000	SURRENDERED MARCH 1952		
Wyandotte	Wyandotte, Mich.	2,624,000	SURRENDERED NOV. 1951		

* Including methanol, other facilities.

Way Out Ahead

Batting a lusty .680 in its attempt to expand U.S. ammonia-producing capacity, it looks like a good bet this week that the Office of Defense Mobilization will reach its goal a whole year ahead of schedule. The latest box-score shows that tax write-offs granted to chemical companies for ammonia production have paid off 17 times out of 25 . . . and the average may yet rise. In tonnage gained, the jump's even more impressive.

Back in Jan. '51 when the government launched its rapid amortization program to expand private industry's productive capacity, the ammonia picture wasn't rosy. U.S. fixed nitrogen capacity came to some 1,291,000 short tons/year. Therefore, 1,639,000 tons had to be picked up within a four-year deadline if quotas considered ample for possible mobilization were to be met—2,930,000 tons/year by Jan. 1, '55.

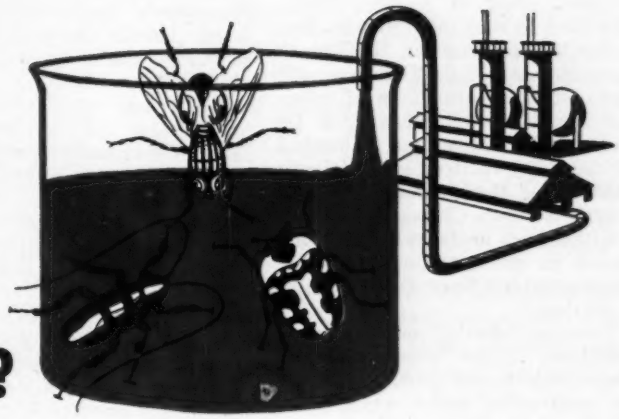
Yet the challenge was met. Today ODM reports that its goal has been reached—thanks to expansion both with and without the aid of write-offs.

In terms of cold cash, over $165 million has been dropped into new ammonia capacity, with ODM backing; in tonnage, over 850,000 tons/year. Much of the impact of the hiked-up capacity hasn't yet been felt, but will be by mid-1954, when all but a handful of the plants now under construction get rolling.

Best guess is that by Jan. 1, '55, total U.S. ammonia production will

What do we know about your business?

Are you planning on Insecticide production?



Out of the progress and growth going on all over our country have come many effective pesticides and insecticides. BHC and Lindane are two of these. If you are thinking about insecticides, the Harte System can provide the know-how—from planning to profit—to design and erect your plant . . . anywhere and now.

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top 3.2 million tons/year. Included will be ammonia capacity by companies like Cyanamid and W. R. Grace—to whom certificates have been issued for production of nitrogen, nitrogen fertilizer.

Coming On: Allied's $8-million unit at Hopewell is latest across the plate, will increase production capacity there some 17%. Shell's anhydrous ammonia plant at Vernon, Calif., scheduled to turn out 150 tons/day, is due in any moment. Phillips at Houston, Spencer at Vicksburg, will start up by December; Lion Oil promises completion of construction by early 1954. Mississippi Chemical (with a 120 tons/day plant), Atlantic Refining and Hooker shouldn't be far behind. Northern Chemical Industries is farther back in the race, still hasn't placed its contracts for engineering construction but "expects to . . . within 30 days."

Some are tottering on the edge of indecision, simply haven't made up their minds to use issued certificates for construction under way. Union Oil doesn't indicate whether or not a $5-million write-off will be applied to the $13-million plant being built at Brea, Calif. (for lease to Union's Brea Chemicals, Inc.). Filtrol likewise declines to state whether its certificate will be used for a $5-million ammonium sulfate fertilizer plant at Vernon, Calif. (slated for completion by Jan. 1, '54).

Out of the Race: Diamond Alkali is typical of those firms that have backed out of contention. With two write-offs in hand, company executives say they took a second look at the economics of the situation, decided they could get along without both plants. At Painesville, it was simply a matter of seeing the handwriting on the wall. Ammonia production had been planned to work in with magnesium production—a plant doomed for the mothballs.

More than taking up the slack, though, are projects being pushed through by companies on their own. Mill Creek Chemical Co. is one, plans to build a $9-million anhydrous ammonia plant with a daily output of 180 tons, beginning by the spring of 1955. Others—like Dow at Freeport—hint that an increase in ammonia capacity is being seriously considered by home-office market researchers.

In view of such promising signs, present indications from ODM are that no more ammonia certificates will be granted—at least for the present. Those who jump in will do so without government-sponsored aid.

Taking Stock on Stockpiles

The government's program to build up war-useful stockpiles of 75 strategic items is about to get a going-over. More than one Congressional committee is now taking a close look at stockpiling practices.

In the running: the Senate Appropriations Committee, under New Hampshire's Styles Bridges, and the Senate Interior Committee's minerals subgroup, chairmanned by George Malone of Nevada.

Don't count out the now-one-man investigating subcommittee of the Senate Government Operations Committee, Joseph McCarthy. Though he lent one of his investigators to the Malone group and announced that he would bow out, he—two weeks later—held hearings in a San Francisco hotel room.

The Target: The focal point of these Senate investigations (none is planned as yet by members of the House of Representatives) will be the General Services Administration's Emergency Procurement Service, which since its start in 1950 has bought items for the manager of the stockpile—first the Munitions Board, and now the Office of Defense Mobilization.

Perhaps a good deal of the trouble that faces GSA boss Edmund Mansure can be attributed to the secrecy surrounding the stockpile program. Specific stockpile objectives and amounts of materials on hand are as closely guarded as atomic secrets. Such secrecy was perhaps justified three years ago when few stockpile contracts had been negotiated and the bulk of the buying was still to be done.

Now, however, with over four-fifths of the total goals achieved, the secrecy policies seem incongruous, especially when information on more significant military matters—aircraft and tank production, for example—is so well publicized.

Where It Stands: The stockpile program, begun during World War II, was designed to give the U.S. a five-year emergency supply of 75 critical items, ranging from antimony, hog bristles, castor oil and fluorspar to quinine, natural rubber, tin and zinc—in general, industrial minerals, chemicals, alloying metals, and drugs.

At current market prices, total stockpile objectives are valued at $7.1 billion. The stockpile has actually spent $3.2 billion so far for what it's bought, though this inventory is now valued at $4.1 billion. Another $1.4 billion's worth is on order.

Buying for the stockpile falls into two classes—nonperishable items like metals and minerals, perishable items like some drugs, vegetable oils, rubber. Such items must be rotated, so GSA is continually selling items from this stockpile and replacing them. Some observers believe that Congressional critics will concentrate mismanagement charges on buying of perishables. They feel that on rubber, at least (*CW, June 28, '52*), GSA has done an astute job. Others wonder whether the real push for investigation doesn't come from the domestic mining industry, unhappy about the volume of material being bought from foreign sources. Malone's probe might concentrate on these points.

GSA defends itself on the grounds that contracts with foreign companies, which look unrealistic in today's market, actually were pretty good when they were made. They admit that some marginal producers received multiyear contracts at premium prices but feel this was justified because of demands made by the military at that time.

One facet of the program that is sure to be bared to Congressional scrutiny is the purchase of materials from behind the Iron Curtain. Early in the Korean war, tungsten—presumably from Red China—was bought in Hong Kong. Feathers for stuffing military pillows were purchased from Poland, the only source of feathers suitable for military requirements.

Stockpile Slowdown: Also a likely candidate for comment is the ODM's slowdown on future stockpile building, which, in effect, limits new purchase commitments to about the 10 most critical materials on the stockpile list—generally, alloying metals.

The criticism here would be along the same lines as the fuss raised against the recent Air Force cutbacks. Say critics: another case of penny wisdom and pound foolishness.

The new ODM policy will not disturb existing contracts, market guarantee agreements, or other production incentive plans made by the now-defunct Defense Materials Procurement Agency, of course, but it will restrict new purchases to one year plus lead time on deliveries, and push some goals that would have been met next year up to 1958.

Investigation Outlook: What will probers find as they look through the records of stockpile acquisitions? Industry men close to stockpile problems feel it's unlikely the inquisitors will

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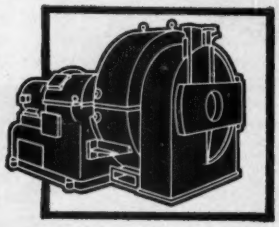
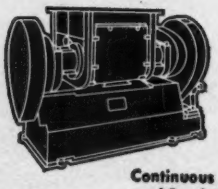


Centrifugals



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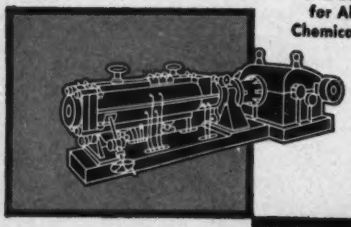

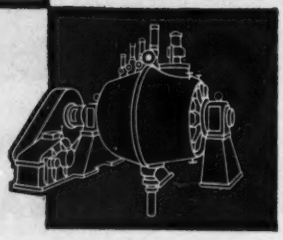

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turn up any palpable mismanagement on the part of GSA, ODM or the Munitions Board.

The now-unanswerable question is whether, had the secrecy program been less stringent, congressmen would have felt the need for investigating the stockpile at all.

LABOR . . . . . .

Sight Set High: Those wage-rate increases that seem to be made each year in chemical and other manufacturing industries are only part of what the labor unions are getting ready to demand. Latest word on long-range labor "wants" comes from CIO President Walter Reuther, who says that industrial workers should be given the following benefits "to bring the nation's purchasing power more in line with productive capacity":

- A guaranteed annual wage.
- Minimum pensions of $200/month for retired employees.
- Individual income tax exemption of $1,000 (instead of $500).
- More federal aid for construction of housing, schools, hospitals.

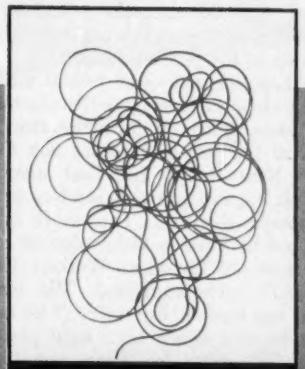
Reuther is telling his unionists that "this increase in purchasing power is essential if we are to avoid a depression."

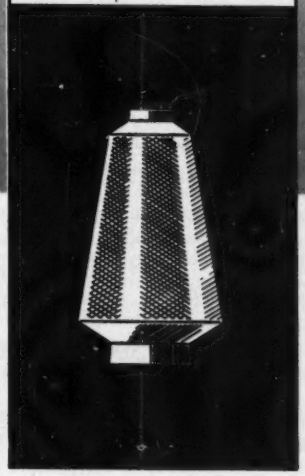
•

Porcupine Picture: Sometimes the week's labor news makes it appear that the country's industrial relations are bristling with as many strikes as a porcupine has quills. This week, these work stoppages directly or indirectly affecting the chemical industry are in the headlines:

- The 235 chemical recovery coke ovens in the Koppers plant at Kearny, N.J., have been idle for more than a month now with no signs of progress toward settlement of the strike by the 800 members of Local 92, United Gas, Coke & Chemical Workers (CIO). Some management employees were living inside the plant until the company obtained an injunction against mass picketing. The union countered by filing an "unfair labor practice" complaint with the National Labor Relations Board, charging that while the company based its stand on its statement that company income has been dropping, the company has refused to furnish the union with detailed data to substantiate the statement. The union had asked a 12¢ wage increase and the company has offered a rise of 5¢/hour.
- It's disagreement over details of a proposed pension plan that has been keeping some 250 production workers

Stauffer Chemicals for





Synthetic textiles

Today, 20% of the total textile fiber produced is manufactured synthetically. Of this figure rayon amounts to well over 805 million pounds. Carbon Disulphide, an important raw material in the viscose process, where it serves as the reagent to chemically convert the crude pulp cellulose to the raw "viscose" material, is one of the many heavy chemicals Stauffer supplies to industry. Other Stauffer chemicals used in textiles include caustic soda, sulphuric acid, chlorine, sodium hydrosulphide, and tartaric acid.

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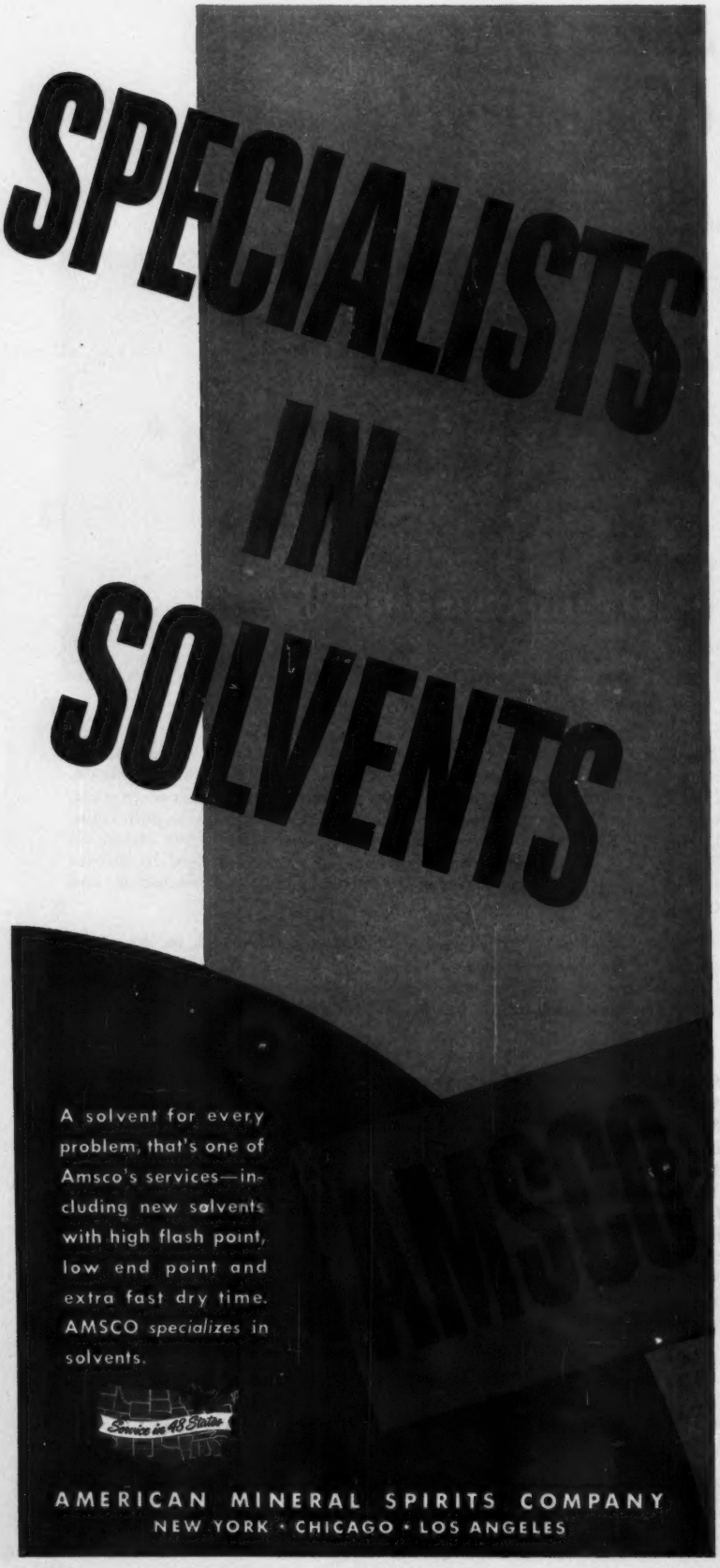
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on strike at the Niagara Falls plant of Pittsburgh Metallurgical Co. for about two months. While the company says the union's request is "far out of line and wholly unrealistic," a spokesman for United Mine Workers District 50 retorts that the company is trying to keep the union from sharing in administration of the pension fund.

• Longest and most violent strike in the chemical domain is the one that has been going on for more than a year at the Jefferson Island Salt Co. near New Iberia, La. Last month, pickets began arming themselves with automatic shotguns. This move was ordered by Preston Delcambre of the International Chemical Workers Union (AFL), who explained, "We don't want any trouble, but we can't let our men be shot down on a legal picket line." The plant has been operating with non-union labor since last October.

• Another Louisiana strike that has dragged on for more than a year is the one being waged by AFL Sulphite Workers and Papermakers against two paper mills in Elizabeth. A dozen houses and at least 34 autos have been destroyed by dynamite, and more than 500 persons have been treated for gunshot wounds or injuries sustained in beatings. Personal mediation by the governor failed to bring the parties into agreement.

• A federal mediator and an international representative of the striking union have come to Buffalo, N.Y. to try to hasten settlement of the strike by about 200 members of the United Brotherhood of Carpenters & Joiners (AFL) at the National Aniline plant.

•

Happy Endings: Three thorns in the side of chemical labor relations have been blunted. Picket signs are down, wages are up:

• A 7½¢/hour wage increase is the basis for settlement of the UMW District 50 strike at the Celanese plant in Belvidere, N.J. The 170 union members had been on strike for 53 days seeking an 8½¢ rise.

• Members of the International Union of Operating Engineers (AFL) have ended their 18-day strike against Monsanto's chlorine-caustic plant in Tuscumbia, Ala. The workers' task is to maintain that plant in standby status.

• A seven-week strike by some 230 AFL Chemical Workers at the Bonnie multiple superphosphate plant of International Minerals & Chemical Corp. near Bonnie, Fla., has ended. With the new wage increase, operators and other skilled craftsmen will receive a top rate of $2/hour.

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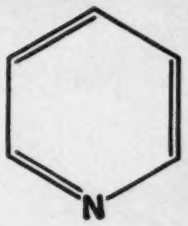

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Start	114.0
5%	114.4
End Point	115.5
Range	1.5
Specific Gravity at 15.5/15.5°C	0.988
Color (Saybolt)	+20
Water, %	0.1

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No Detail Unimportant

Frankly admitting the fact that good public relations can make (or conversely break) an industry, The American Pharmaceutical Manufacturers Assn. this week got down to basic do's and don'ts with its publication of a new book—A Primer of Public Relations. Basic rule: there's no substitute for organization of public relations and meticulous attention to details.

Peculiar to the pharmaceutical industry, however, are special problems any public relations director can well class "out of the ordinary." There's the immediate personal impact the news of any new product has on a public conditioned by radio and television to a high interest pitch . . . the emotional factors aroused by publication of any information involving animal experimentation . . . the unusually close contact between distribution and sales-promotion personnel and those they serve. All demand an extra-fine degree of careful handling, demand dextrous explanation, and the realization that "the public's everyone —everywhere."

"It's not a question of getting people to listen," says the primer. "Our public literally crawls in over the transoms, and everybody's main difficulty is to manage sensationalism so that the medical profession as well as the consumers are not alienated."

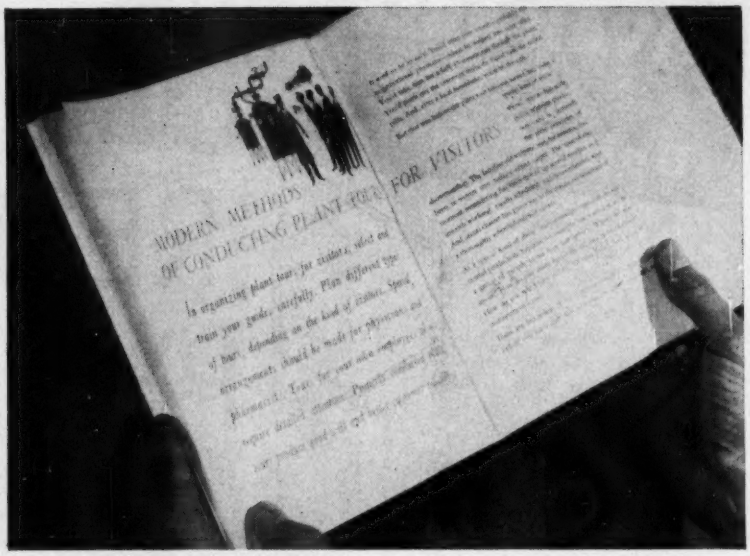
The trick of good explanation lies in the ability to argue at an everyday level, sticking to facts, and an ever-conscious awareness of the interest of the people concerned. Everybody deserves an answer; . . . shortcomings are bound to occur, and the most important thing to remember is to consider all complaints seriously, with a minimum of delay."

In regard to community relations, the Pharmaceutical Assn. admits a cut and dried procedure can't be detailed. "Measures taken must be tailor-made . . . must be exactly fitted to the situation at hand."

As far as plant tours and annual reports are concerned:

Plant tours are a special kind of show today. They're a full-scale production — "velvet carpet style." A smooth-running plan, precise explanations are necessities—but again it's largely a question of feeling your way, dependent upon conditions at hand. Best advice: it takes little to make a plant tour fizzle; no amount of preparation is too costly.

Annual reports, warns the primer, often share the same fate as antiques—they lie around and gather dust unless they're given careful thought. Main dangers: cluttered, clumsy, dull interpretation. You can best beat all evils by applying the rules of good advertising, use plenty of illustration and snappy explanations.



PHARMACEUTICAL PRIMER: ". . . a short first step in public relations."

Back in Full Swing

Driving hard on world markets, West Germany has jacked up its chemical exports 20% in the first six months of 1953. Spearheading the push: pharmaceutical products, photochemicals — exported largely to other European countries.

Today in Germany, chemicals account for 12.4% of total exports; and if present indications prove trustworthy, the rising quota should prove an ever-increasing challenge to other exporting nations.

The West German Chemical Society sees trends, however, that should suppress any overexuberant optimism. Despite a tremendous jump in exports of pharmaceuticals, profits have fallen off due to a gradual shift in emphasis of the type of product exported—from specialty items to raw materials and intermediates. The other highlight, photochemical products, has suffered from no such drag. Plastics exports, similarly, have increased 40% over last year's sales records abroad, account for a large share of the 1953 spurt.

But, say German producers, "We've still got a long way to go." Today about 70% of chemical exports go to other European countries. The large potential market in eastern Europe and China "has not yet proven itself in tangible results." Strenuous sales campaigns are currently underway to strengthen Germany's position in those areas.

German Exports Gain Ground

Material	Jan.-June 1953	Jan.-June 1952
	(in 1000 DM)	
Inorganic and heavy chemicals	278,799	253,959
Nitrogen fertilizer	103,720	59,961
Phosphate fertilizer	4,687	3,204
Potash fertilizer	54,194	45,157
Explosives, flammables	8,264	7,757
Ferroalloys	12,097	1,174
Pharmaceuticals	105,377	74,146
Glue and Gelatine	11,292	4,975
Plastics	72,756	67,604
Photochemicals	15,714	11,279
Wax, stearin	19,924	13,867
Tar products	42,942	35,548

Total exports (Jan.-June 1953): 8.472 billion DM.

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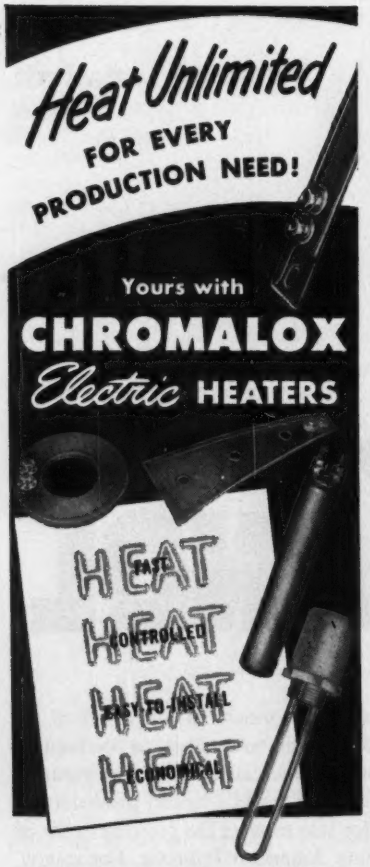

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Protection Precedent

The chemical industry this fall and winter will be watching lead and zinc tariffs.

Domestic producers, who've been howling for more protection against mounting imports since prices began toppling 18 months ago, are about to have their day in court.

The Tariff Commission starts public hearings Nov. 3 on the domestic producers' request for import quotas and higher duties. This would be under the "escape clause" of the Trade Agreements Act, which provides for higher tariffs or lower quotas when domestic industries are hard hit by foreign competition. According to Washington experts, the miners' prospects for tariff relief look stronger than ever.

Triple Tie-up: Chemical men are interested from several angles:

- It's the most important test case so far on escape clause tariff relief.
- Some of the larger lead-zinc producers involved are also chemical producers—like Eagle-Picher Mining & Smelting Co., Joplin, Mo., and American Zinc, Lead & Smelting Co., St. Louis.
- Chemical companies are big lead-zinc consumers—especially producers of paints, ceramics, plastics, and tetraethyl lead.

Domestic lead-zinc producers have plenty to be unhappy about. Lead prices have fallen from the 19¢/lb. post-Korea high to 13.5¢ last week, zinc from 19.5 to 10.5¢.

Along with the price declines have come widespread mine closings. It's estimated that lead-zinc production in the 11 Western states this year will be about two-thirds of last year's output.

The miners charge that their market has been depressed by dumping of foreign lead and zinc in the U.S., mainly from Australia, South Africa, Mexico, Canada, and some South American countries, where low-cost labor and devalued currencies provide competitive advantages.

Duty Rise, Quota Drop: Lead imports jumped from 257,000 tons in 1951 to 637,000 tons in 1952, while domestic production dropped from 390,400 tons to 375,000 tons.

Zinc imports rose from 390,449 tons in 1951 to 565,029 tons in 1952, while domestic output fell from 672,520 tons to 661,023 tons.

Both trends are being accentuated this year.

Domestic miners have asked the Tariff Commission to recommend: (1) a 50% hike in import duties over the Jan. '45 rates, which have since been cut by reciprocal trade pacts; (2) import quotas of 350,000 tons/year on lead, 300,000 on zinc.

This proposal would boost the tariff per pound on lead metal from 1 1/16¢ to 2 1/2¢; lead ore, from 3/4¢ to 1 1/16¢; slab zinc, from 0.7¢ to 2.1¢; and zinc ores and concentrates from 0.6¢ to 1.8¢.

Sliding Scale Sought: Since the market began declining, domestic producers have sought protection through proposed legislation setting up a sliding-scale tariff, rather than escape-clause relief through the Tariff Commission. They think a sliding-scale tariff bill is more politically palatable. It sets up a base price for the two metals, allows for increases or decreases in import duties as prices move up or down from the base. Such a bill was defeated earlier this year, but a new one is being worked up for introduction next session.

ETHYL'S COSTELLO: For lead importers, a half-open door.

Supporters of the bill in the Senate Finance and House Ways and Means Committees pushed through a resolution before Congress adjourned, directing the Tariff Commission to make a formal investigation into the effect of lead-zinc imports on domestic industry.

The Tariff Commission's probe will be made concurrently with its hearings on the industry's escape-clause relief application, and the report to Congress is due next by Mar. 31. The report, which is expected to substantiate the industry's charge, will contain

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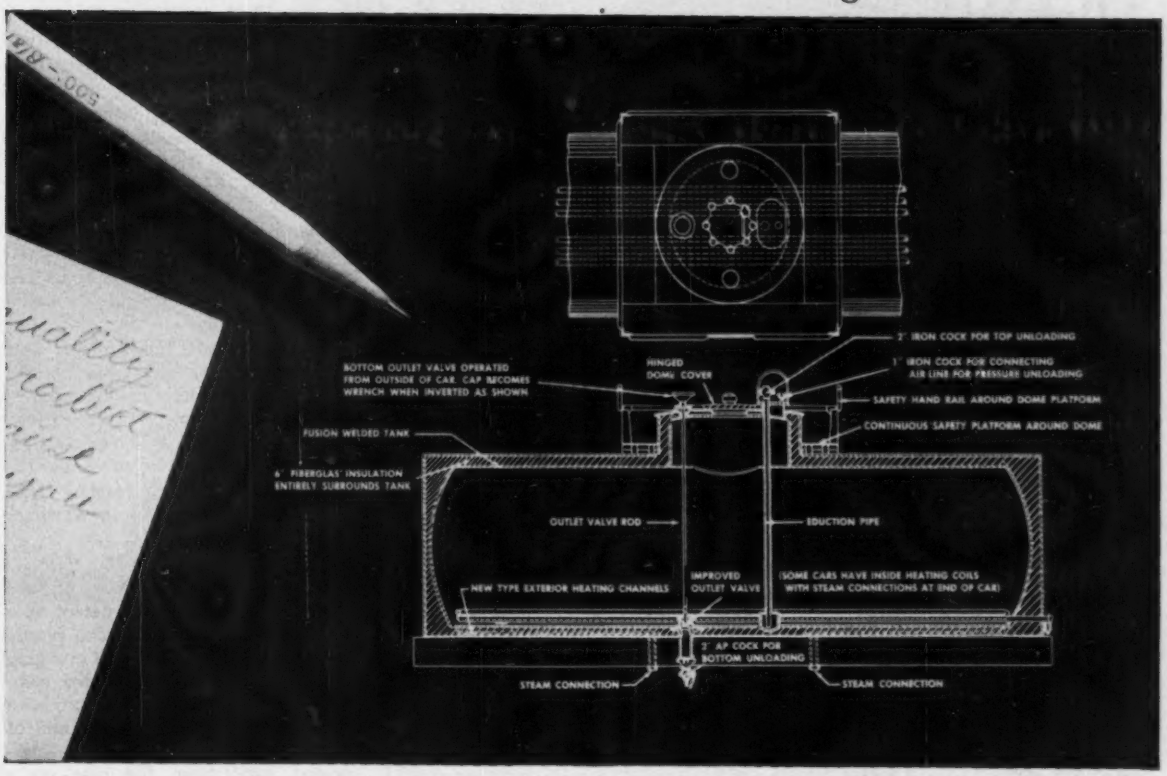
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Each of these Dow owned cars is insulated, protectively lined and fitted with nickel heating coils. They are equipped to permit unloading from the top or bottom by air pressure or pump. There are frangible discs or safety valves to prevent possible injury to workers from excessive air pressure, and they have protective plug cocks on the bottom outlet leg.

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no official recommendation, but will provide abundant ammunition for next year's sliding-scale tariff fight in Congress.

Chemical Firm's View: The consumer view on the lead tariff question was summarized recently by J. A. Costello, vice-president of Ethyl Corp., at the American Mining Congress convention in Seattle. Costello fought the sliding-scale tariff bill at Congressional hearings and will presumably oppose the tariff relief application at next month's Tariff Commission hearings.

Costello told the miners that domestic production takes care of only about one-third of total U.S. consumption, which he said will increase substantially in the future. He warned that additional trade barriers would "discourage" foreign producers from entering the U.S. market when lead is short, and would discourage investment in developing foreign mines to meet future lead needs.

Said Costello pointedly: "We believe that if we are to expect foreign producers to supply one-half of our needs when the commodity is in short supply, then they should not be backed out more than proportionately when it is in long supply."

Next question: If this principle were accepted as fair and equitable for the mining industry, would Congress want to extend it to other industries—so that U.S. chemical companies, for example, would have to share the domestic market with foreign rivals in peacetime as well as in wartime?

LEGAL . . . . . .

No Default: Harold A. Levey of New Orleans, holder of a 1931 patent on a process for making continuous plastic film, now knows that his suit charging four large chemical and rubber companies with infringement won't be a swift and easy victory. First, one of the defendants — U.S. Rubber — extricated itself from the case on a jurisdiction technicality. Next, the three other major defendants—Goodrich, Eastman Kodak and Monsanto—entered general denials and attacked the validity of Levey's patent. They cite previous patents and literature dating back to 1893 as covering "all substantial parts of the alleged invention." These companies are asking for dismissal, an injunction against further litigation, and costs.

•

Oil Oratory: Final arguments have been heard by Federal Judge Richard S. Rodney at Wilmington, Del., in the $1.4-million civil suit of William Whitman Co. against Universal Oil Prod-

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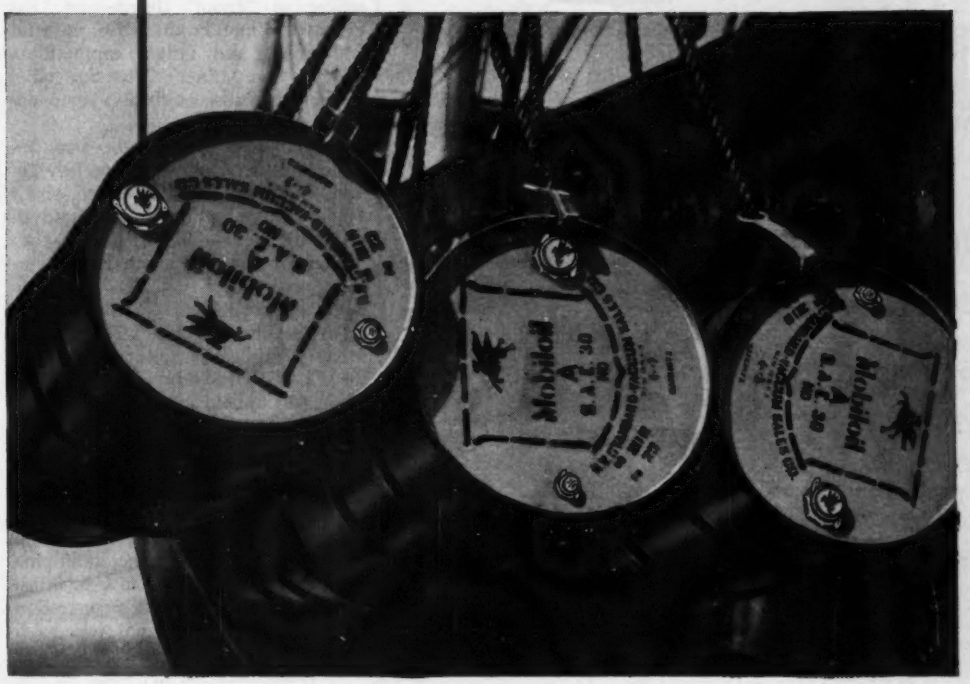

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B&I . . . . . .

ucts over royalties on an oil-cracking process patent (*CW Newsletter, Mar. 14*). This case now is in the hands of the judge, who'll decide whether Whitman should recover, with interest, royalties paid to Universal on patents that later were declared invalid.

•

Ancient Tradename: One of the oldest tradenames in the ever changing field of drug and pharmaceutical products is the bone of contention in a civil suit pending in U.S. District Court, New York. Lehn & Fink Products Co., maker of "Lysol" disinfectant, has charged Milner Products Co. with infringement and unfair competition, alleging that Milner's "Pine-Sol" label is likely to cause confusion or to deceive purchasers.

Lysol, whose name has been in continuous use in Germany since July 15, 1889, and in the U.S. since about 1890, is now selling at the rate of $3.5 million/year in this country, according to the complaint; and advertising expenses have been upped to more than $900,000/year. In 1950, a Patent Office examiner turned down Milner's application for registration of the Pine-Sol trademark, and this decision was upheld by the Commissioner of Patents, the petition says.

FOREIGN . . . . .

Enterprise/Philippines: The Soriano group of enterprises has started up three new ventures in the Philippine Islands with an assist from U.S. firms. In each case, it obtains cooperation and advice, but does not relinquish capital control. Its projects include:

- Manufacture of dry yeast for use in the baking industry, produced under an agreement with Standard Brands.
- Production of vitamin B_{12} from cane molasses, to be sold as a poultry and cattle feed additive, with technical aid from Pacific Yeast Products.
- Manufacture of a "quality-brand ink."

•

Recovery/Germany: The Farbenfabriken Bayer AG, Leverkusen, the largest of the successor companies of the former IG Farben combine, says that its total sales this year will exceed 1,000 million marks. Reason for the booming figure lies in part with the recovery of the firm's export business, company officials say. Export rate now exceeds 34.6% of total turnover, about 12% over last year's figures.

•

Detergents/Great Britain: Chemical authorities in the British Isles estimate that expansion of the synthetic deter-

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B&I . . . . . .

gent industry in Britain is saving imports of oils and other materials to the tune of £12 million annually. Detergents now represent some 25% of the nation's consumption of washing agents, should continue to expand, reports the Ministry of Food.

•

Urea, Phenol Resins/Philippines: Following a decision made by the Borden Co. to set up a synthetic resin manufacturing plant in the Philippines, Reichhold Chemicals, Inc., has sent its vice-president in charge of the Pacific Northwest Div. to the islands to look into the prospects of establishing another plant to produce urea and phenol resins.

The vice-president, T. S. Hodgins, told McGraw-Hill World News that Reichhold will start from imported phenol, urea and formaldehyde if it should decide to go ahead with the project. Most promising local outlet for urea: the rising plywood and paint industries.

KEY CHANGES. .

E. R. Rowley, to president, Titanium Metals Corp., New York.

Kenneth Osborn, to chairman of board, **Gladding Coit,** to president, General Latex & Chemical, Cambridge, Mass.

G. L. Hatheway, Robert Hobbs, Griffin Morrel, Frederick Schuster, Charles Wilson, to directors, Davison Chemical, Baltimore.

H. C. Mathey, Bicknell Lockhart, to vice-presidents, Liquid Carbonic Corp., Chicago.

Robert Ridges, to vice-president, S. B. Penick & Co., New York.

James Eversole, to vice-president for research, Carbide's Bakelite Co. Div., New York.

Carl Dolmetsch, to executive staff, Mathieson Chemical, Baltimore.

Kenneth Irey, to production manager, Heyden Chemical, New York.

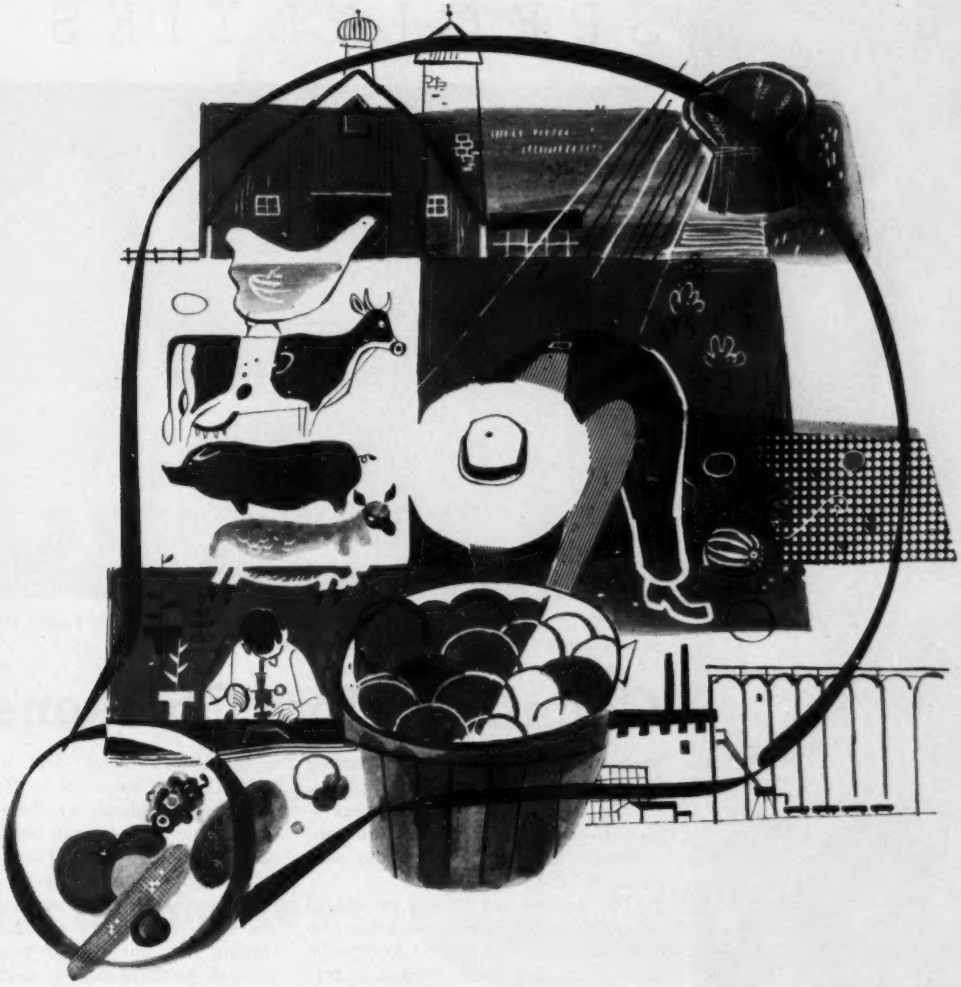
Philip Muccilli, to production manager, National Lead, New York.

Albert Nordt, to head of purchasing department, Glyco Products, Brooklyn, N.Y.

Walter Mattlage, to assistant general manager, Du Pont's Fabrics and Finishes Dept., Wilmington.

KUDOS . . . . . .

Stanley Clark, to chairman, Drug, Chemical and Allied Trades Section, New York Board of Trade.



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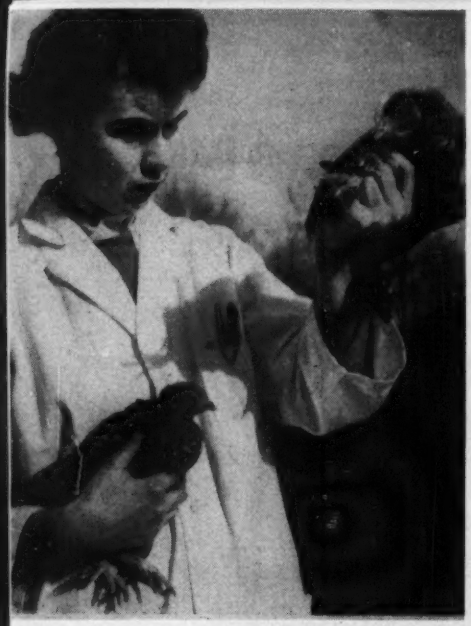
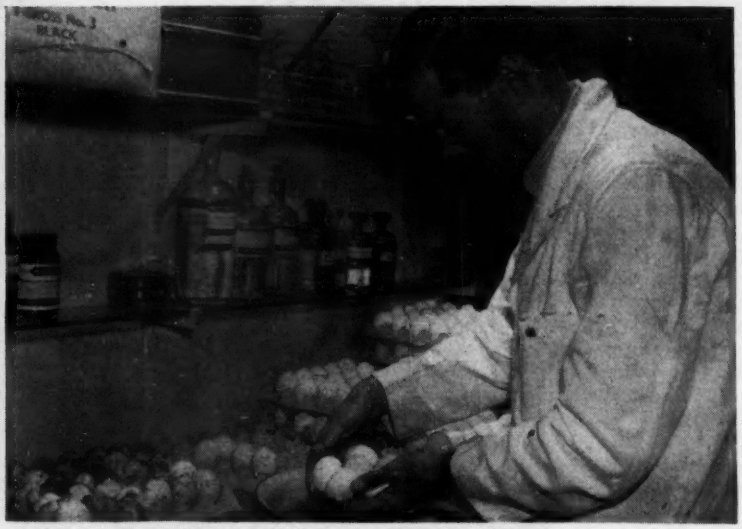


BIRDS in hands of Doreen Cooper were fed penicillin-fortified grain.



GERMICIDES stretch storage life of eggs. Here technician John Tucker dunks eggs in antibacterial water to kill rot-causing germs.

CHICKEN FEED, nitrofurazone-fortified, pays off in dollars saved.

Counting More Chickens . . .

The role chemistry plays in putting more food on our plates is far from limited to boosting yields of vegetation. Every bit as important are contributions for improving poultry and livestock (CW, Feb. 21).

Poultry raising has always proved to be a tricky problem—no sooner has one disease been licked than another one bobs up to plague the chicken or turkey raiser. Sulfa drugs, vaccines, and now antibiotics have all helped to give him more and larger fowl.

Last week, for example, Charles Pfizer added a bright new product to its veterinary medicine line, new Terramycin forms particularly designed to treat C.R.D., an air-sac infection that has lately become one of the major problems of American poultry ranchers.

The new antibiotic treatment can be applied in mineral oil injections given to fowl; the oil is injected in the fowl's neck to provide long-time medication. Terramycin can be put in poultry drinking water. This system of medication is often advantageous with fowl, not only since many maladies produce a loss of appetite, but also because it is difficult to get drugs into birds' gullets.

This is, of course, only one of the newest applications of antibiotics to poultry raising; they have been used experimentally for treatment of a number of diseases.

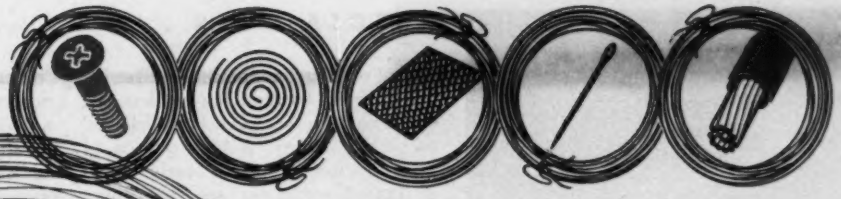
World-Wide Problems: Research in poultry raising is by no means limited to the United States. This week, the CW CAMERA stops off in Houghton, in eastern England, to observe work of the Poultry Research Station, part of the Animal Health Trust.

This group, under the direction of R. F. Gordon, is exploring many avenues to boost poultry production, including not only disease control but general poultry raising methods as well. Ranchers the world over stand to benefit by its work.

Primarily, however, the station is working on problems of the British poultry raiser. It's the second largest agricultural industry in the United Kingdom, bringing in a revenue pegged at close to $500 million/year. But there's still a tremendous loss to disease—over $55 million in Britain, and estimated higher than that in other areas.

Good Prospects: As in this country, antibiotics are being probed for possible poultry applications. One of the brightest prospects at the Houghton station is chloramphenicol (Chloromycetin). It has shown up well in lab tests as a control for fowl typhoid. This disease, which often appears to spread in spite of careful sanitation of the fowl runs, can affect chickens, turkeys, ducks, pheasants, and many other fowl. It is a problem in nearly all poultry raising areas. Vaccines for curing typhoid are under investigation, and some sulfa drugs have shown value in typhoid treatments.

Coccidiosis is another widely oc-



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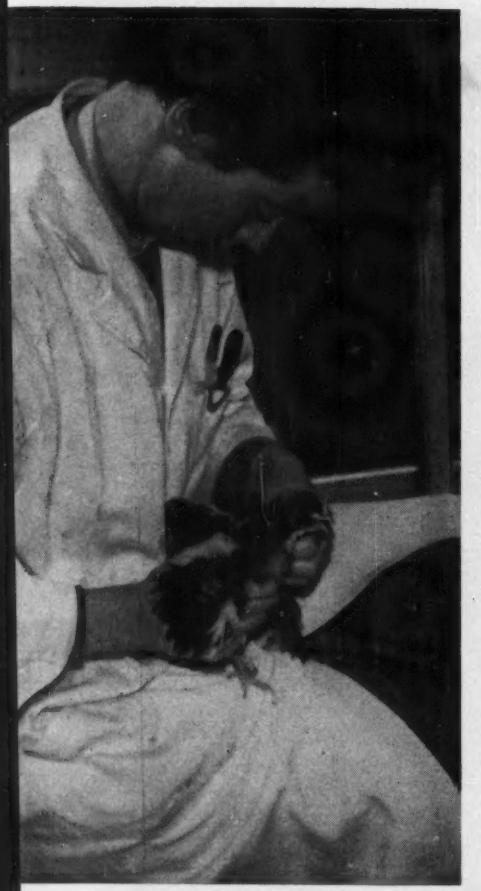


CHICKS are her babies at England's Poultry Research Station.

curring disease—in the U.S. alone it is estimated to cause poultry loss of over $10 million/year. Antibiotics and sulfa drugs help control this infection. The Houghton scientists have worked out a treatment that appears to insure freedom from it: chicks are given feed containing nitrofurazone from the time of hatching until they are about eight weeks old.

Other work that has proved successful is control of a turkey disease called blackhead. Particularly trying to the poultry raiser, it often hits his flock about breeding or marketing time. At Houghton, the drug Enheptin (2-amino-5-nitrothiazole) has proved very effective in eliminating the disease.

Egg to Ax: Researchers at the station seek to improve all phases of poultry raising. Egg storage problems are also under investigation. Washing eggs in a germicide solution prior to cold storage has proved beneficial: the warm dip solution (a cold solution appears to cause suction within the egg that draws in bacteria) destroys bacteria that might enter the egg through the shell, cause spoilage.

Egg sanitization also helps in raising better chicks by reducing incidence of egg-borne diseases (C.R.D. is believed to be egg-borne), A high portion of fowl loss occurs in the early stages of growth—estimates are that about a quarter of hatched chicks never reach the age of one year—and Houghton workers are seeking to cut this pre-marketing loss.

Antibiotics in feeds are now pretty common practice in this country, and work with them, as well as with other growth-stimulating compounds, is being carried out. Penicillin has the jump on the rest of the antibiotics from an availability standpoint and pricewise, but other pharmaceuticals are being followed up. Bigger, healthier, faster-maturing chickens are the payoff.

But scientists at Houghton are working on problems of poultry raising that begin even before the egg. Among the techniques under trial is artificial insemination; it is hoped to result in flocks of standard quality, and perhaps of disease-resistant strains.

Special Service: Far from limiting its research to its own flocks, the Houghton Poultry Research Station is "on call" to the British farmer. Poultry raisers whose flocks are stricken with a malady they can't diagnose send the dead birds to Houghton, where they undergo a complete post-mortem examination. Raisers then get advice on how the remaining members of the flock can be treated.

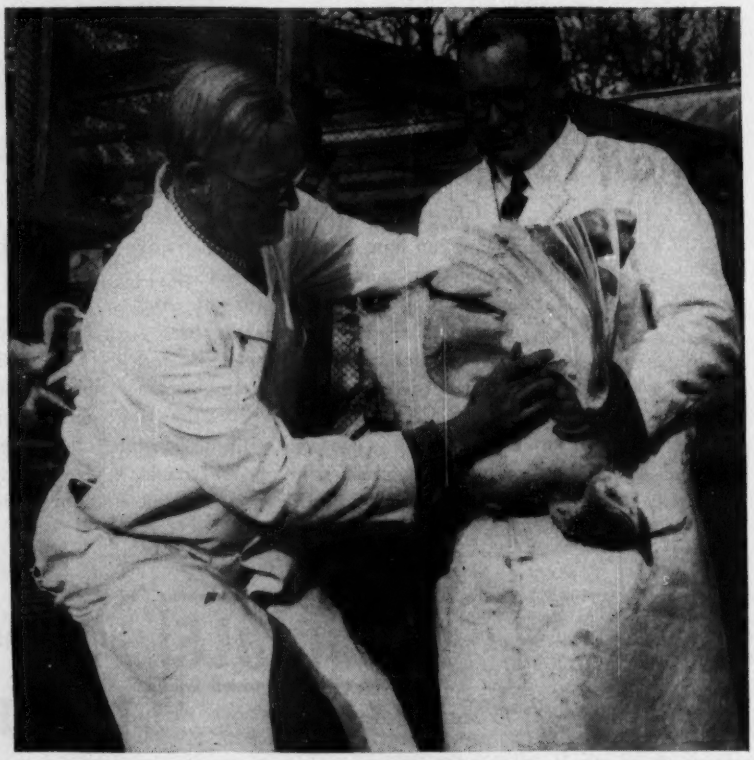
The staff at Houghton (one of the four voluntary divisions of the Animal Health Trust) is supplemented with student help. Veterinary medicine students from all over the British Empire—Doreen Cooper (*see cuts*) from Vancouver, B.C., is an example—come to the station on fellowships.

The results of their work in poultry raising are twofold. There's the greater productivity—a goal toward which not only English, but also American state and federal experimental stations are working. And there's a broader market for the products of pharmaceutical and chemical industries.

•

Copier: Radio Corp. of America is showing interest in photocopying, a recently granted patent indicates. The reproduction system described in U.S. Pat. 2,653,091 makes use of a diazo dye, stabilized with trichloracetic

. . . Even Before They're Hatched



STATION VETERINARIAN C. Horton Smith (left) and a coworker prepare to inoculate a turkey with Enheptin against blackhead disease.

Sodium Tripolyphosphate

Tetrasodium Pyrophosphate
ANHYDROUS

Sodium Polyphos
(SODIUM HEXAMETAPHOSPHATE)
(SODIUM TETRAPHOSPHATE)

Trisodium Phosphate
CRYSTALLINE
MONOHYDRATE

Sodium Phosphates

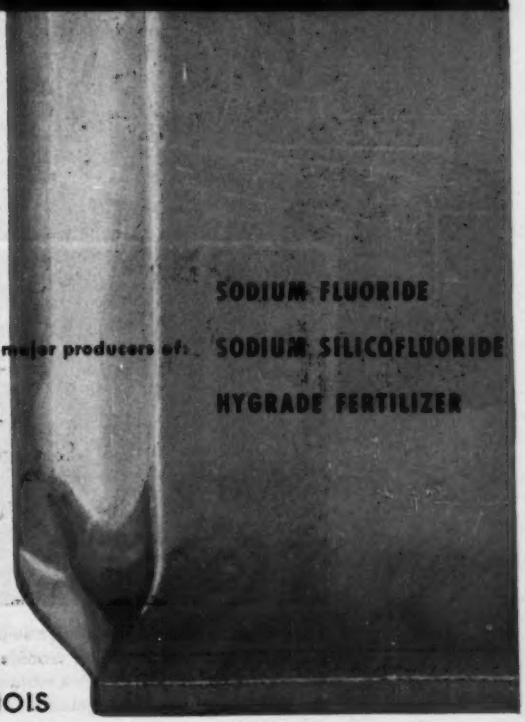
BLOCKSON

Chlorinated Trisodium Phosphate

Disodium Phosphate
ANHYDROUS
CRYSTALLINE

Monosodium Phosphate
ANHYDROUS
MONOHYDRATE

Sodium Acid Pyrophosphate



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Westinghouse control centers minimize maintenance problems and give Mississippi Chemical the advantages of grouped control. Individual units can be installed or removed with file-drawer efficiency.

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Mississippi Chemical officials called on Westinghouse to help them get a complete "packaged installation" with the best electrical equipment at no extra cost. One feature was that Westinghouse control centers were installed in nonhazardous locations throughout the plant. This gave Mississippi Chemical the advantages of centralized control without paying for more expensive explosion-proof equipment.

Texaco's Eagle Point Refinery got top-system dependability, efficiency and flexibility for future expansion. Westinghouse turbine-generators supply all the power, but there's also a tie-in with the local utility for emergency purposes. Dual-feeder cables carry power to all Westinghouse outdoor load centers. If one faults, the other can handle the full load. All Eagle Point has to do for any plant expansion is add substation capacity.

American Cyanamid and Westinghouse engineers worked out a power distribution system that prevents outages. If there's trouble on any feeder, power is switched to another. If a substation faults, other substations carry the load through cross connections. This system can be easily and inexpensively expanded as the plant grows.

These solutions are only four examples of how Westinghouse equipment and services can meet your power distribution problems. If you'd like more information on the above, or other installations, call your Westinghouse representative. Or write to: Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pennsylvania.

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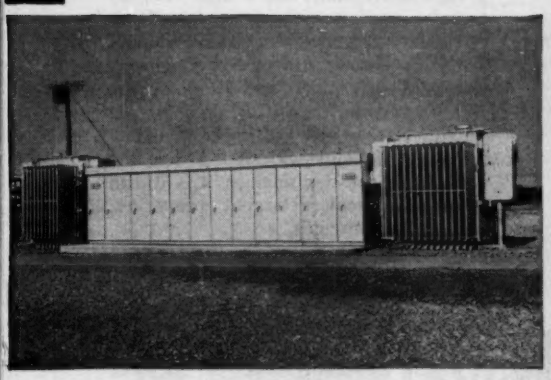
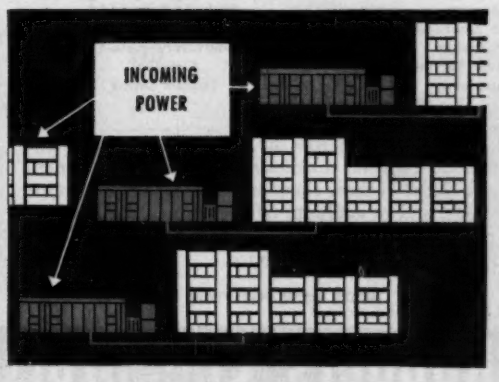


Eagle Point Refinery's Westinghouse substations are complete with switchgear, transformers and circuit breakers in one, compact arrangement. The system is highly flexible and dependable.



American Cyanamid spotted 10 substations throughout the processing area. When new buildings are added, additional substations will be installed without interfering with production.

For You—

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Sodium Cyanide
Potassium Cyanide
Phthalic Anhydride
Sulfuric Acid
Mono-tert-Butyl-meta-Cresol
Catechol
Sodium Sulfite
Diphenylaminechlorarsine

• Bulletin C-3-103, shown here, lists the properties, reactions and uses of 25 synthetic organic chemicals produced by Koppers Chemical Division. Most of these chemicals have established commercial applications, and in addition, offer rich, new fields of investigation to research and development chemists. The Bulletin describes all 25 of the products listed above.

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SPECIALTIES . . . .

acid. The image is developed by heating the diazo layer in the presence of a salt of that acid—sodium, potassium, ammonium, mono-, di-, or triethanolamine—and also in the presence of an azo dye coupler. The heating causes decomposition of the trichloracetic acid, production of the diazotype color.

•

Resistance Plus: A glass fiber fabric, imbedded in polyfurfuryl alcohol resin and coated with rubber, makes up a new corrosion-resistant material developed by Atlas Mineral Products Co. of Pennsylvania (Mertztown). The resin and rubber are bonded together with "a member selected from the group consisting of cyclized rubber and chlorinated rubber," says U.S. Pat. 2,653,118.

•

Mold Coater: Masonite Corp.'s chemical division is introducing a new ingot mold coating compound, Masonite 8-C4-FL. The new product, a water-soluble organic powder, is applied by dipping, spraying or flooding the mold. It is claimed to improve the quality of steel ingots by reducing blistering.

•

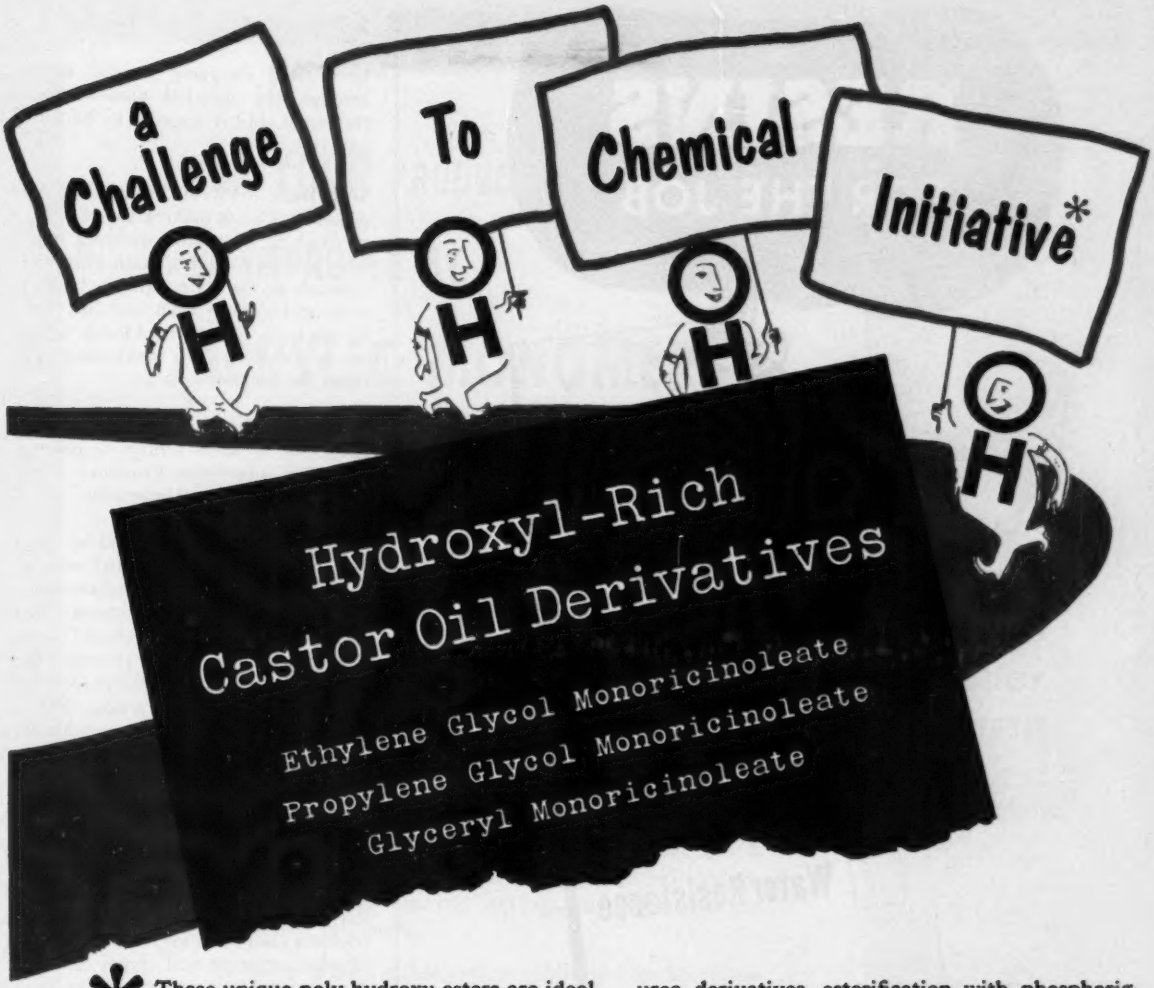
Antiknock: Smoother engine performance is the aim of a new motor oil now being promoted by Atlantic Refining Co. Like Shell's gasoline additive TCP, the new product is claimed to remove engine carbon deposits, improve efficiency of high-compression engines. Atlantic's Premium Motor Oil is described as a heavy-duty, high-detergency lube, was introduced on the East Coast last week.

• But Atlantic is far from the only one to be introducing a new motor oil. Gulf Oil Corp. is now making a special winter-grade oil, Gulfpride H. D. Light. The new oil is said to possess high detergency, has a high viscosity index and low pour point. It is claimed to meet the classification of the Society of Automotive Engineers for 5W, 10W, 20W and 20 motor oils.

• And the Texas Co. is coming out with a new oil, Advanced Custom-Made Havoline. Designed for the high-compression engines, it is said to have unusual detergent properties, high film strength.

•

Red Menace: To Florida fishermen, menace these days is the "red tide," a marine growth that kills fish, and that has become active in Gulf of Mexico waters in recent weeks. In Sarasota Bay, where the "tide" has caused the sea to be carpeted with dead fish, workers from the U.S. Fish and Wildlife Laboratories in Galveston, Tex.,



* These unique poly-hydroxy esters are ideal starting points for synthetic conversion. Possible reactions of these multi-hydroxy esters are sulfation, acylation, iso-cyanate coupling, acetalization, oxidation, amination, condensation with urea derivatives, esterification with phosphoric acid.

The presence of the polar hydroxyl group suggests their use as surfactants, cellulosic plasticizers, dye carriers, lubricants, and cosmetic ingredients.

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Flexricin® 9 (Propylene Glycol Monoricinoleate)	288
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CW-103

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IN CANADA: American Resinous Chemicals of Canada, Ltd., Toronto, Canada

have tried dragging copper sulfate through the infested area—a costly treatment, but it appears to be fairly effective.

•

Moss Base: A Florida firm, Brown Engineering Co., is making use of a local product in its plastic molding work. Brown collects the Spanish moss that abounds in the state, dries it, treats it with acid to form a tan, mat-like fiber. In this form, along with Florida hemp, it can be used as a reinforcing material for polyester resins.

•

Synthetic Subs: F. Ritter & Co. (Los Angeles) is now selling a pair of coumarin substitutes, Coumasin Crystals and Tonkasyn Amorphous.

•

Dust Discourager: A method of treating shaped products of vinyl resin so that they will have a reduced tendency to accumulate static electricity has been worked out by American Cyanamid researchers. The process, described in U.S. Pat. 2,652,348, consists of treating the plastic article with a volatile liquid containing a sulfosuccinate salt. The amount of liquid applied should be enough to deposit salt about 0.2–4% of the weight of the article.

•

Tilth Builder: Monsanto is still pushing research on soil additives, U.S. Pat. 2,652,379 indicates. The patent covers a method of improving the tilth of silt-containing and clayey soils by use of a slight amount (not more than 2% by weight) of a linear water-soluble polymer.

•

Eye Saver: A composition to produce a nonglare coating on transparent objects has been patented by Sun Chemical Corp. (U.S. Pat. 2,651,-583). The compound consisting of 5-20% by weight of a water-soluble gum, 0.25-5% by weight of a water-soluble transparent dyestuff, and 0.05-2% by weight of a water-soluble wetting agent in water forms a nonglare, transparent film on the surface to which it's applied.

•

Rat Killer: Delmar Chemical Ltd., Canada, has come up with a new anticoagulant rat poison. The new compound is 3-(α-[*p*-acetamino]-phenyl-β-acetylethyl) -4- hydroxycoumarin. It can be used in edible food carriers at the rate of about 0.025% by weight of the carrier.

•

Zep West: Zep Mfg. Corp., Atlanta, industrial sanitation chemicals maker, has opened a new branch office and warehouse in Kansas City, Mo.

CAN YOUR PRODUCTS BE IMPROVED BY ACRYLIC MONOMERS?

Lower Prices for Rohm & Haas Acrylates and Methacrylates Encourage Wider Use

Reduced prices recently were announced for Rohm & Haas ethyl acrylate and methyl acrylate. This followed a sharp reduction some months ago in the price of methyl methacrylate. In the light of these lower prices you will find it will pay to take another look at the acrylates and methacrylates as a means of improving *your* products.

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RESEARCH . . . .

Bridging the Ulcer Gap

Peptic ulcer is the focus of a fast-stepping program of research at a spate of pharmaceutical firms.

Here's a roundup of the new ideas in ulcer control, the chemical products they are spawning.

Canvass the medical profession on the cause of peptic ulcers and you will come up with a substantial vote for mind over matter. It's far from unanimous, but most medics subscribe—often with reservations—to the psychosomatic theory. Ask these same doctors what to do about an ulcer and you are likely to get replies ranging from psychiatry to surgery.

That, of course, is a generalization; and like all generalizations, it won't hold up under critical analysis. But it does highlight a broad gulf between the extremes in modern ulcer therapy. Bridging the gap is a growing network of chemical agents. Ulcer drugs, in the main, don't attack the hypothesized fundamental nervous and emotional causes of the disorder. Rather, they are beamed at the distressing symptoms (acid stomach, painful spasms, etc.) associated with ulceration of the stomach or intestinal wall by pepsin and hydrochloric acid.

Early attempts at ulcer treatment centered upon the use of antacids. Indiscriminate alkalizing, however, has fallen into disrepute. The ideal antacid acts in a mild way, doesn't cause rebound stimulation of stomach acid, is nonirritating to the stomach, and doesn't disrupt digestion or other vital functions.

Sodium bicarbonate, probably the most popular antacid, obviously shows up poorly in the light of these standards. In recent years, the trend has been toward insoluble drugs (e.g., calcium carbonate), particularly those that adsorb (e.g., aluminum silicate gel). These solid agents have a high capacity for neutralization, tend to form a protective coat over the stomach lining. On the other hand, they are slower-acting than soluble compounds like sodium bicarbonate. Buffer compounds (e.g., citrates, phosphates, acetates, silicates) that reduce gastric acidity instead of giving complete neutralization are often valuable in the antacid approach. Protein hydrolysates also have the capacity for reducing acidity, with a minimum of strain on the stomach.

A newer development, not yet in routine medical practice, is the use of ion-exchange resins as acid neutralizers. It hasn't been conclusively proved that ion-exchangers are superior to more prosaic antacids. But Rohm & Haas Co.'s Amberlite IR-4 has given very satisfactory results. Whittier's Resmicon adsorbs pepsin in addition to neutralizing acid. Fortunately, few side effects result from the resins' insolubility.

Newest approach to the ulcer prob-

These anticholinergic drugs spring from a fertile, modern approach to ulcer therapy:

Tradename	Maker	Chemical Name
Banthine Bromide	Searle	β-diethylaminoethylxanthene -9-carboxylate methobromide
Pro-Banthine	Searle	β-diisopropyl analog of above
Pamine	Upjohn	epoxytropinetropate methylbromide
Antrenyl	Ciba	diethyl (2-hydroxyethyl) methyl ammonium bromide phenyl cyclohexyl glycolate
Prantal Methylsulfate	Schering	N,N-dimethyl -4- piperidylidene-1,1 - diphenylmethane methylsulfate
Centrine	Bristol	α,α - diphenyl -γ- dimethylaminovaleramide
Elorine Sulfate	Lilly	1-cyclohexyl -1- phenyl -3- pyrrolidino-1-propanol methosulfate

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Glucuronolactone

Report as a Growth Factor

Glucuronolactone, when fed to animals, prompts faster growth. Studies made with guinea pigs by Miller et al.[1] with chicks by Almquist et al.[2] and Reid[3] and with rats by Deichmann et al.[4] show that glucuronolactone increases rate of growth under controlled conditions.

Glucuronolactone, added to diets deficient in pantothenic acid, can also alleviate the manifestations of a pantothenic acid deficiency in rats, as reported by Hundley and Ing.[5]

Glucuronolactone is now available commerically for your study and use. A booklet describing the product will be mailed at your request.

1. Miller, C. O., A. E. Siehrs, and F. G Brazda, Glucuronic Acid as a Growth Factor in Guinea Pigs, Proc. Soc. Expt. Biol. & Med., 30, 636-38, 1932-33.

2. Almquist, H. J., E. L. R. Stokstad, E. Mecchi, and P. D. V. Manning, Identification of the Rice Factor. The Carbohydrate Component. J. Biol. Chem. 134, 465-1940.

3. Reid, M. E., Ascorbic and Glucuronic Acids as Growth Factors in Chicks. Fed. Proc., 9, 368, 1950.

4. Deichmann, W. B., J. J. Clemmer, and C. Downing, Glucuronic Acid Lactone, a Growth Factor in Rats. Fed. Proc. 11, 1, March 1952.

5. Hundley, J. M., and R. B. Ing, Prevention of Pantothenic Acid Deficiency with Glucuronolactone and other Compounds Related to Ascorbic Acid. Fed. Proc. 12, 417-18, 1953.

"Fine Chemicals from Corn"

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lem gets close to fundamentals. Briefly, it's an attempt to find chemical compounds that can interrupt the action of the vagus nerve, prevent the production (due to over-innervation) of excess hydrochloric acid. Results, thus far, are very encouraging. Several companies have introduced anticholinergic agents (so named because they inhibit acetylcholine) of this kind within the past year or so. Upjohn Co.'s Pamine, which is brand-new, is said to be 20 times more effective as an antispasmodic than atropine. (For other nerve-blocking agents, their producers and their chemical identities, *see chart.*)

Coming Along: Still in the experimental stage is a technique for promoting the healing of ulcers by applying a protective surface coating to the affected area of the stomach or intestine. Largely because of researchers' inability to find suitable coating materials, this approach has taken a back seat to more rewarding probes of antacids and anticholinergics.

But pharmacologists Mark Nickerson and Charles Curry, of the University of Michigan, have sparked new interest in this line of attack by the results they have obtained using polysiloxanes.

The two scientists gave daily injections of histamine to rats and guinea pigs, tested siloxanes for their ability to guard against ulceration in the laboratory animals.

They found that protection was most effective with emulsions of relatively high-molecular-weight polymers. Nonemulsified polymers were comparatively ineffective. During a 10-day period of histamine administration, guinea pigs received complete protection against ulceration by daily oral doses of polysiloxane emulsions. Control animals died of perforated ulcers in an average of five days.

An offshoot of anti-ulcer research is the quest for sedatives and antispasmodics, which are valuable adjuncts to ulcer therapy. This area of study—which just yielded a new series of smooth muscle antispasmodics to chemists of Lakeside Laboratories (*CW, Oct. 3*)—coupled with the continuing direct attack, will give ulcer-fighting researchers little chance to rest on their laurels.

Loaded for Peace

UNDER THE GAZE of fascinated opening-day oglers, North Carolina State College physicist Clifford Beck mans controls during the maiden run of the college's nuclear reactor. Newly commissioned, after college authorities skirmished with the Atomic Energy Commission over procurement of fissionable uranium-235 (*CW, Sept. 19*), the reactor is America's first to be earmarked for nonmilitary purposes.

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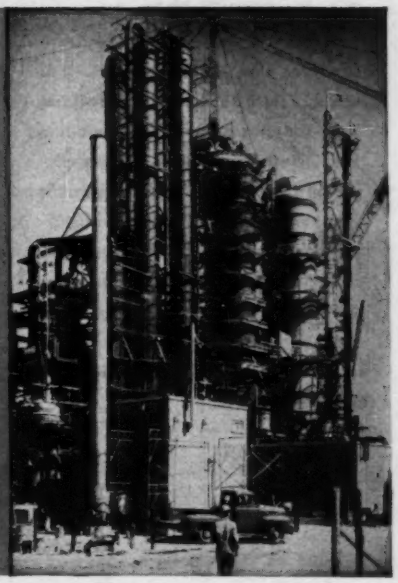

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COTTON, wilt disease-infected, yields control clues.

Getting the Goods on Cotton

At this late date, you would think the ecology of cotton is pretty much an open book. Yet an intensive probe of cotton's growth habits, insect enemies, and reaction to a variety of environmental factors is now under way at Empire Cotton Growing Corp.'s new £220,000 (about $617,000) African research station (Uganda).

It's all part of a program to determine how well different types of cotton are becoming acclimated in Uganda. Cotton is still a relatively new crop in East Africa, is the focus of a

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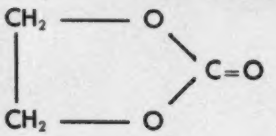

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PESTS get special care in insect house.

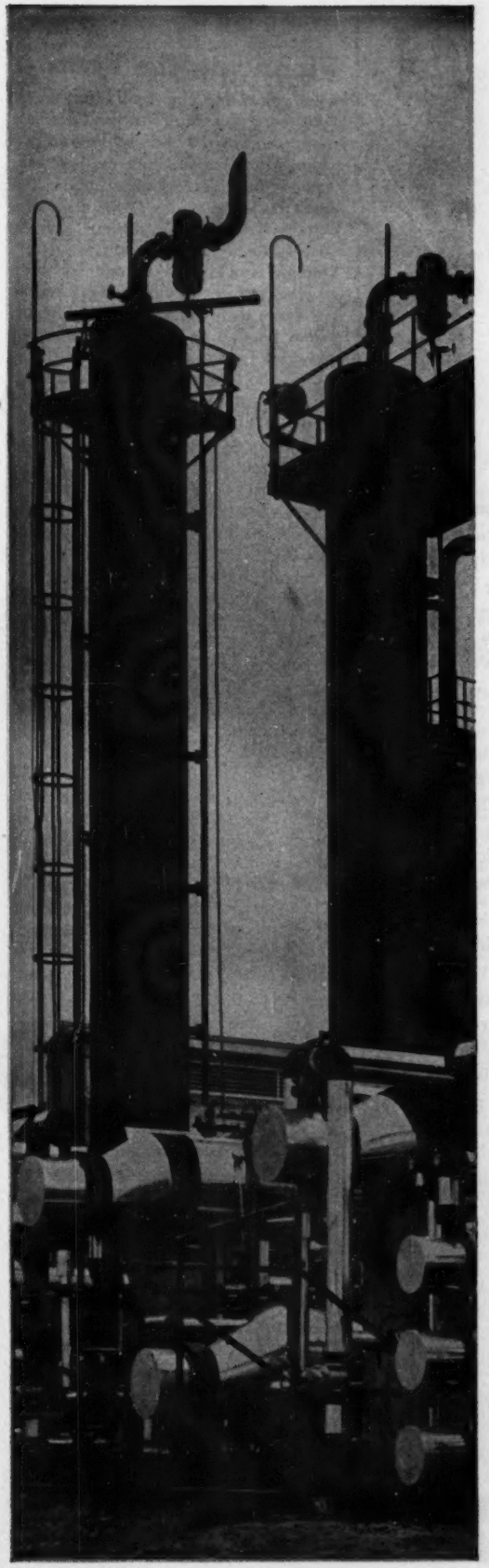
diversified campaign of research that's yielding data (on fertilizers, pesticides, etc.) of prime significance to Britain's agricultural chemicals industry.

But this is just one facet of the station's work. Situated at Namulonge, outside Kampala, Uganda, the new research setup replaces experiment stations in Trinidad and South Africa, is now the center of Empire Cotton Growing Corp.'s research on behalf of the cotton industry throughout the British Commonwealth.

In line with the importance of its international role, the research center is perhaps the best equipped installation of its kind. Thriving in captivity are scores of species of insect pests used in toxicant tests. The station's fields and experimental plots possess the most comprehensive range of cotton breeding stock to be found anywhere in the world. A vital cog in the Commonwealth economy, the new research center's influence will be felt from Aden to the West Indies.

•

Direct Action: A new technique for the direct halogenation of sensitive aromatic amines is the result of research at Alabama Polytechnic Institute. The method makes use of dioxane–bromine complexes, precludes the necessity of blocking the amine—normally standard procedure in halogenations of this kind.



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This field is not new to Kay-Fries. You've probably seen our ads on TRIETHYL ORTHOFORMATE. We've been manufacturing it for a good many years—matter of fact we recently reduced the price to bring it into the "one-dollar a pound" field of intermediates. We've also made TRIMETHYL ORTHOFORMATE in pilot plant quantities. At any rate we're interested in ortho esters. If you have any questions about these or other Kay-Fries intermediates, please don't hesitate to contact us.

American British Chemical Supplies, Inc., Sales Agents for Kay-Fries Chemicals, Inc., 180 Madison Avenue, New York 16, N. Y.

Financing the Facts

First resort for chemical literature in New York, the library of the Chemists' Club is virtually a bibliographical blood bank for neighboring scientific and industrial organizations. This week the library, faced with an inevitable blood-bank problem, launched a full-scale replenishing campaign. Donors won't have to roll up their sleeves; rather, they're being asked to dig down deep for the financial transfusion needed to sustain the library's activities for the next year.

It's a good investment for industry. In the past year and a half, more than 3,000 representatives of companies (large and small) have signed the library's guest ledger.

Several factors contribute to the library's popularity with industry men. It serves as an indispensable source of standard reference material for scores of small metropolitan-area firms that cannot maintain up-to-date shelves of numerous (and often expensive) books and journals. Too, the library makes it possible for all—including companies with impressive literature resources—to gain quick access to many obscure foreign and domestic periodicals.

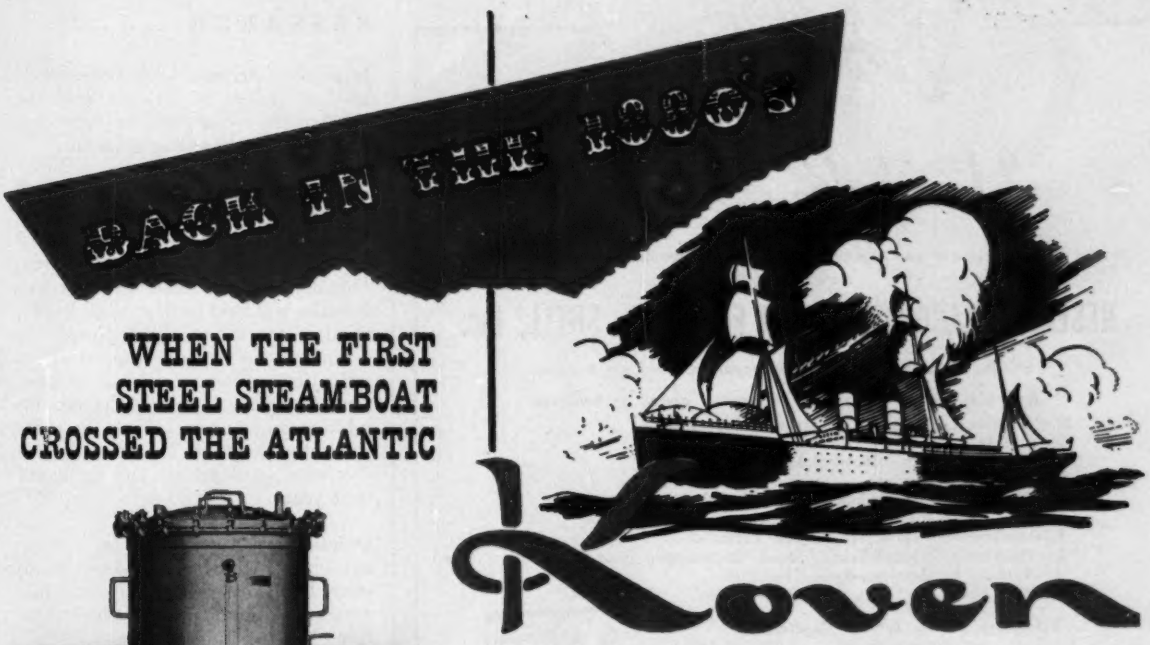
More than 50,000 volumes and 260 different periodicals line the shelves. And they're not all long-hair scientific journals: business and industrial news and reference material are also collected, carefully gleaned for statistics to beef up the library's file of product and process items, chemical consumption figures, market trends, and industrial research activities.

There's also a list of prizes and awards given to and by chemical companies, a collection of company histories, and an aggregation of source material in chemical nomenclature. Popular with toastmasters is the library's file of biographies of prominent chemists and chemical engineers.

Strictly a reference repository, the library works on a first-come, first-served basis. Although books and journals are kept in strict captivity, photostats and microfilms are available at cost. And the library's staff answers mail requests for information, prepares bibliographies for data searchers, makes (for a fee) literature searches and translations of foreign chemical papers.

Fund-raising, on the other hand, is a relatively unfamiliar activity of its sponsors; until recently, the library was entirely financed by club members.

Within roaring range of the New York Public Library's classic stone



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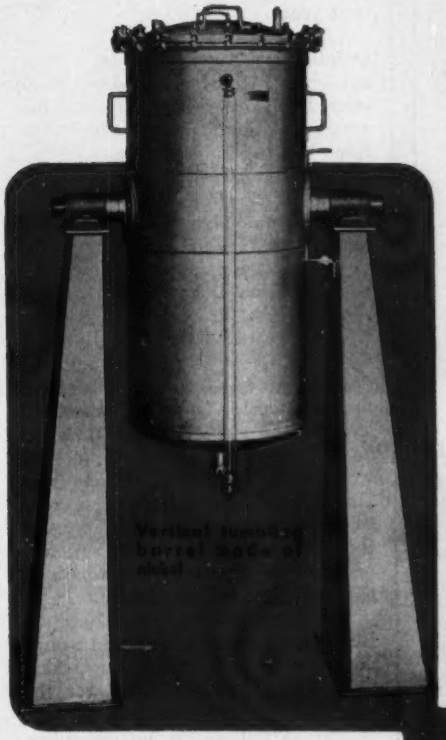

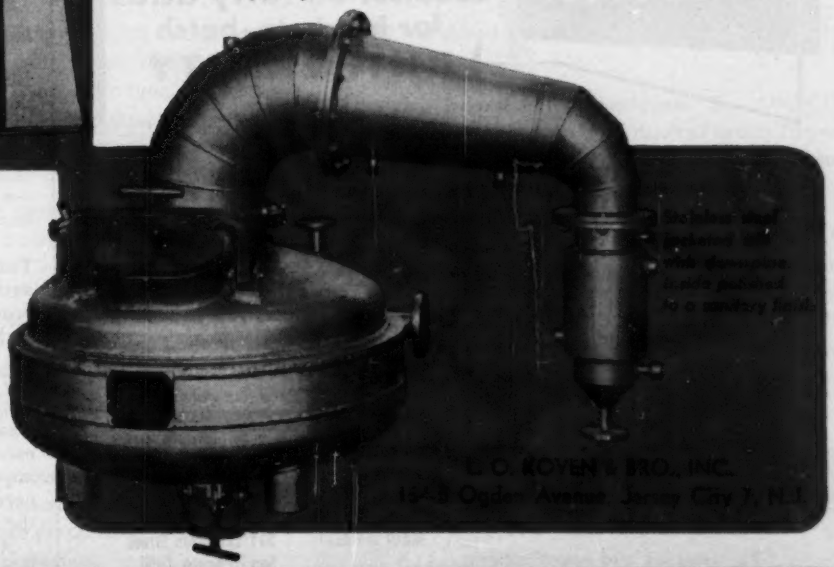

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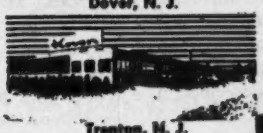

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RESEARCH . . . . . .

lions, the Chemists' Club bookshelves needn't quake. In its own field the club's library competes on favorable terms with its imposing neighbor.

•

Polymer Lessons: The chemistry and physics of high polymers is the draw for a series of six lectures sponsored by the National Bureau of Standards. Industry and academic polymer authorities will hold forth on such fundamentals as: recent developments in chain transfer; mechanism of fibrin formation; copolymers in dilute solution; the glassy state in polymers; inhibition and isotope effects in polymerization kinetics. The series begins this week, will extend into spring of next year.

•

Quintet: Five reagents are newly available in the highest-purity grade offered by Fisher Scientific Co. They are: ammonium fluoride; silver chloride; lump antimony; resorcinol; hydrogen peroxide.

•

Providing the Means: Sixty new grants totaling $150,000 have been approved by Research Corp. for the support of basic research. It's the fourth group of Research Corp. grants this year, brings the current 1953 fiscal total to $428,000. Now in progress under a Research Corp. stipend is a study of the relationship between molecular structure of molecules and their behavior toward polarized light. The work is the brain-child of New York University chemist Kurt Mislow, could —according to Mislow—make possible the prediction of molecular structure of certain substances on the basis of their effect on polarized light.

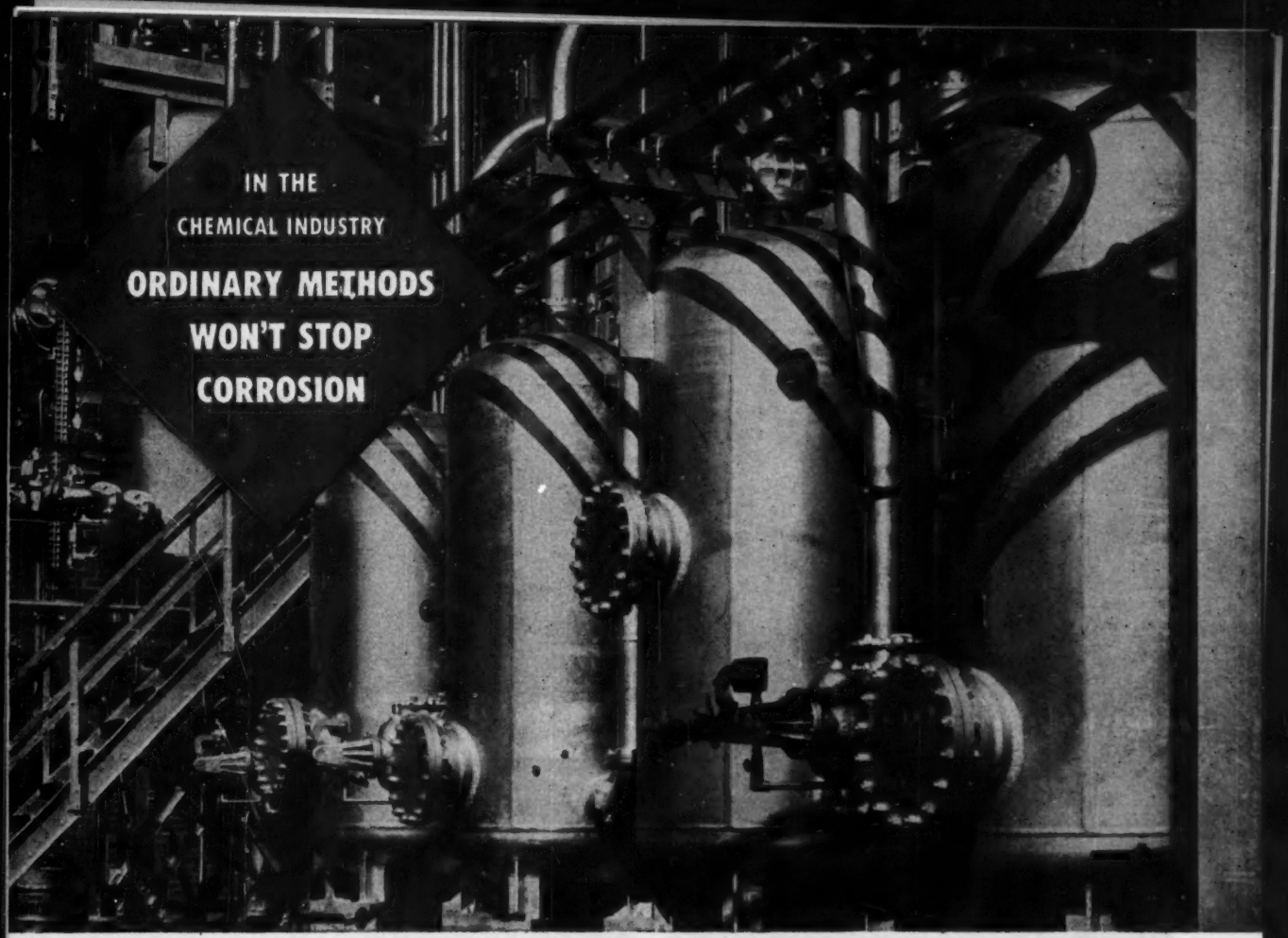
•

Blueprinted: A new central research laboratory is in the offing for Quaker Oats Co. (Chicago). Slated for the suburban Chicago area, the new laboratory—according to preliminary plans —will be a two-story brick and glass structure.

•

Toxicity Droppers: Preparation of hydroxymethyl streptomycin, hydroxymethyl dihydrostreptomycin and hydroxymethyl streptomycylamine is the subject of a U.S. patent (No. 2,637,724 recently granted to Chas. Pfizer & Co. The compounds are white, water-soluble solids possessing excellent antibiotic properties. Most important, they are a lot less toxic to nerve endings than is streptomycin in the forms now available.

Also described in a recent U.S. patent (No. 2,611,770) are several new antiviral sulfonamides developed by researchers of American Cyanamid Co.



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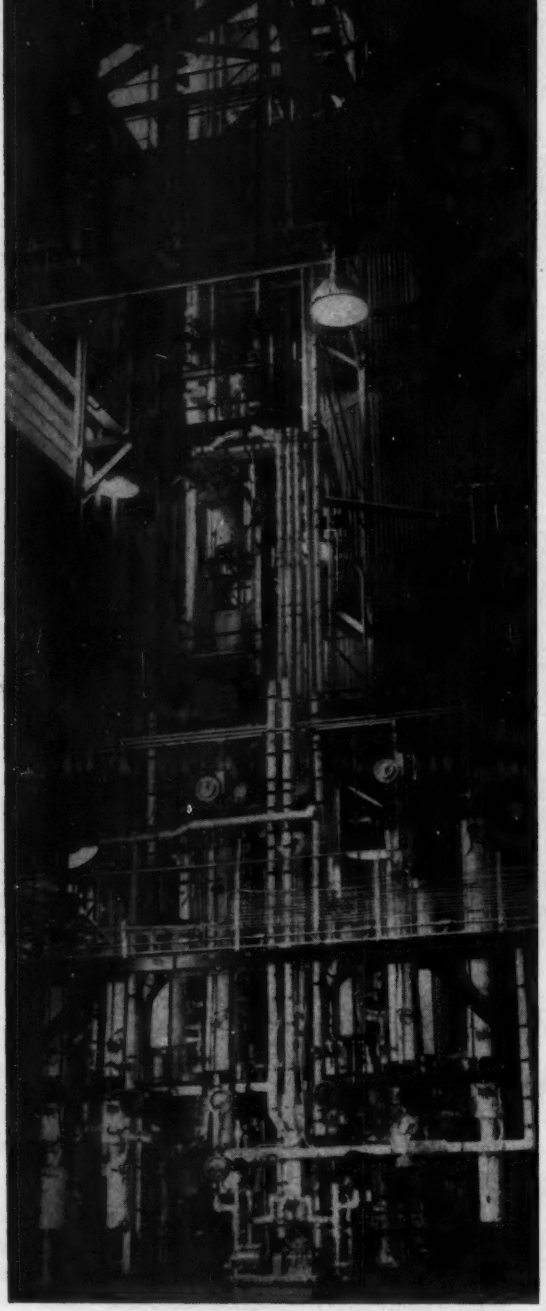


Equipment: Easier.

Getting Help: First in toughness.

Pollution: Tied for first.

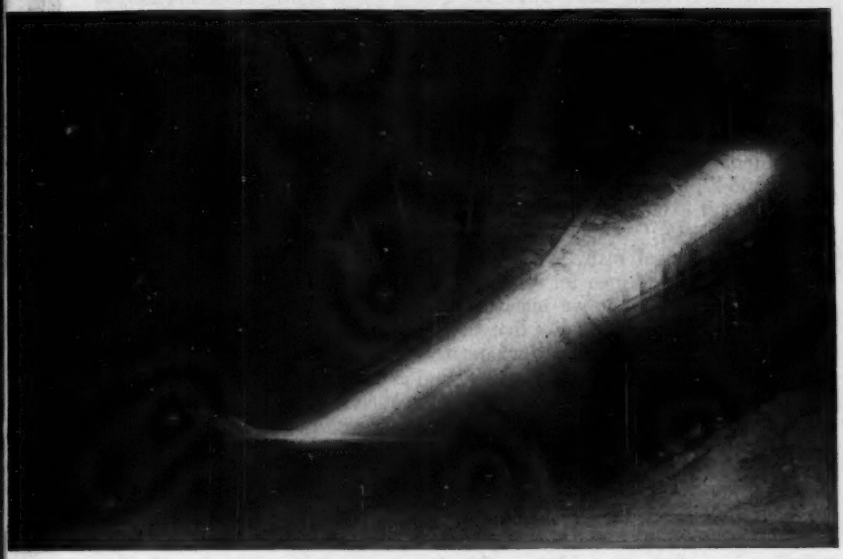
Top Worries: Pollution, People

If a manager of a chemical plant today isn't worried about either pollution or the difficulty of getting good engineers and other technical help, chances are he's bothered about scheduling or delays in delivery of equipment or raw materials. But don't bet against either of the first two as being his number-one headache. Four out of five of the executives responding to CW's survey last week nominated either one as the worry they would most like to do without.

What this points up, of course, is the sharp change in the pattern of the plant man's worries over the past two or three years. This isn't surprising though, for in the months immediately following the outbreak in Korea, when the country was straining for extra capacity, demand for equipment and raw materials outran supply. This caused sleepless nights for everyone—and particularly for the plant man.

Then, as the squeeze started to ease, he began to wonder about scheduling. By that time he had learned how to deal with priorities and government regulations, how to keep the salesmen satisfied and the purchasing agents happy. But the future was uncertain, and his main problem was to keep the operation efficient and

Scheduling: A headache for some.



Raw Materials: Seldom better.

to keep it flexible at the same time.

Scheduling is still a problem and, in some cases, so are equipment and raw materials. And though they're the ones that require immediate solutions, they're not, as one plant manager put it, the stuff of which ulcers are made.

The questions of (1) getting good engineers, and (2) pollution, on the other hand, are bothersome, gnawing problems. They are, moreover, ones that seem destined for a long run at the top of the plant managers' worry list.

To a large extent, of course, the pattern of problems is dictated by the particular area in which the plant operates. Here's a regional rundown of the comments of men answering CW queries:

Northeast: Equipment, in general, is much easier to get than it has been for some time. Says one plant manager, "Deliveries are pretty well back to normal. We have a three- or four-month wait for items that formerly required 18 months." Order backlogs and incoming business, for the most

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part, remain at high levels, and executives expressed little fear on that score. Labor trouble and manpower problems at the lower level are regional. Many think that layoffs in other industries will swell the manpower pool for chemical companies.

Pollution, too, is a regional problem. Many plant managers in the New York-New Jersey-New England area put pollution—either air or stream—at the top of their lists. And in the Buffalo-Niagara Falls area, there was almost unanimous agreement that pollution was the most pressing problem. The situation came to a head there last year when industrial pollution of Lake Erie and the Niagara River took a heavy toll of fish. City, state and federal authorities forthwith urged action by industry. And at the same time, city and town authorities have been asking chemical firms to cut down on their emission of air pollutants.

Chemical companies rose to the occasion, have spent large sums in combating pollution. But they're well aware that they'll have to spend a lot more before the problem can be called solved.

Getting technical help is a general problem in the Northeast. Said one man interviewed: "When we really go out and dig for them, we can find them. But it's a tedious process." Of nontechnical help, the same man expressed the view of many when he said: "The supply of men for regular plant work is tight, but we manage to squeak through. The quality that's available is sometimes below what we'd like."

Southeast: Plant managers in the Southeast are probably more optimistic, less harried than their counterparts in any other section of the country. They all agreed that the South is due for a bigger share of chemical production. Stream and air pollution have been a problem, will continue to be one. One happy point, however, is that many of the plants built in the South are relatively new, hence have been designed to minimize pollution problems.

But even the Southeast is not completely without its share of worries. Fertilizer manufacturers feel they are due for some readjustments because of the drop in farm income. CW verified this with spot checks of farmers around Atlanta. Some have pared their fertilizer consumption by half. Soil conservation payments won't take care of the farmers' lowered income either. In one county, farmers get but 71¢/acre of open land. Out of 100 acres, the farmers can fertilize less than four at present prices with their federal soil conservation payments.

Insecticide makers, too, are worried. Insects are slowly building up immunities to the modern weapons, and farmers have indicated a switch-back to old stand-bys such as arsenicals.

Around Birmingham, where most of the chemical plants are small, plant managers say they have no particularly knotty problems. Equipment and personnel are available to meet the present demand.

Southwest: Equipment supply in the Southwest is, on the whole, good. Equipment that used to take two or three years to get can now be had in less than a year. Alloy steel is much easier to get, although you still can't buy alloy steel equipment off the shelf. Delivery on electrical equipment has perked up considerably, but it still takes 8, 10 to 12 months to get transformers.

For plant managers in and around Houston, pollution right now is the number-one worry. Here, as in the rest of the country, the trend is to design pollution-prevention equipment into new plants. But even companies that have done this and have foreseen the pollution uproar confess to having troubles. Said one man, "It just seems that the more plant you have, the bigger is your pollution problem."

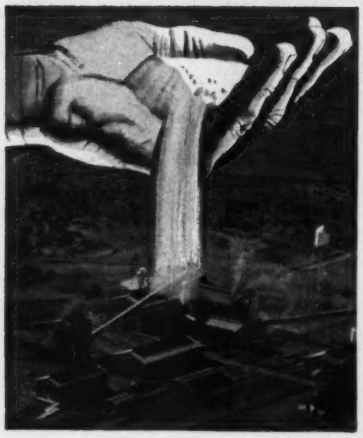
Scheduling in the Southwest, as elsewhere, is a problem. But most plant managers feel they've learned how to smooth out the peaks and valleys by looking ahead. Local taxes and anticipation of deflation have put the squeeze on profits, have caused extra concern over cutting production costs. They have also caused more emphasis to be placed on quality and packaging of the product.

Labor is abundant, but there's difficulty in keeping workers and keeping them happy in the face of production cutbacks. On getting the right kind of technical help, some say it's merely difficult, others say it's impossible.

Midwest: Detroit and Louisville plant managers admit air pollution is their principal headache. But plant managers around Chicago and Cleveland—although they cooperate with civic authorities on studies—have no air-pollution troubles.

Equipment supply is good to fair. Unskilled labor is in good supply; skilled labor, in some places, is short. Most say that engineers are hard to come by.

Scheduling is a problem for some. One plant manager points out that



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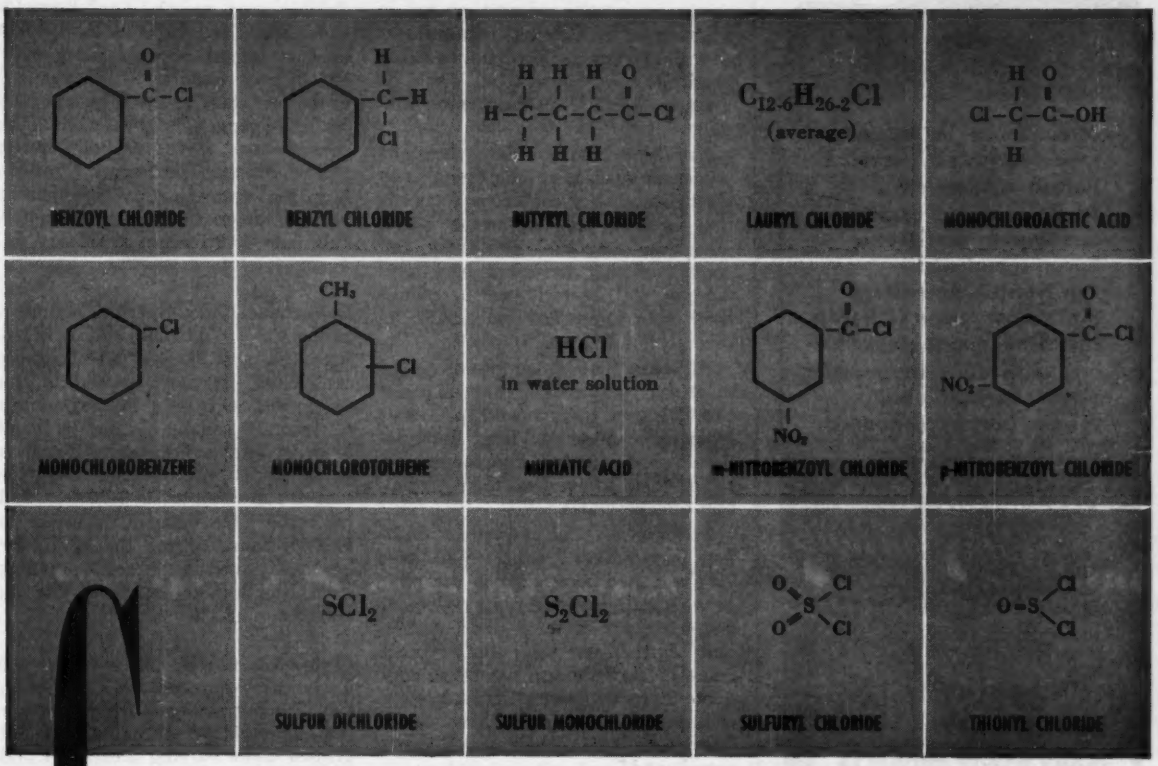

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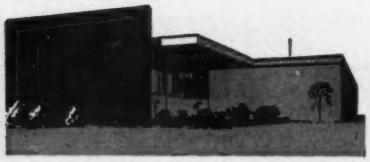

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customers aren't ordering as far in advance or in such big quantities as they did formerly. This is only a minor headache now, he says, but would be a real problem if his plant were running full tilt.

Far West: In the West, the companies are divided in their thoughts on the availability of engineers. Some say they have no trouble on that score, others say they can't find them. But companies that have cut back production and been forced to reduce their labor forces are reluctant to let their technicians go.

All agree that the supply of equipment has improved. Raw material supply is good but many complain that increased competition from both domestic and foreign companies has forced them to overhaul their production cost programs.

Pollution isn't too much of a problem in the West, either. Said one: "We've raised some dust in the past, so we install dust and fume collecting systems every time we add a new unit." In the same vein, another plant manager said the firm has taken adequate steps to prevent it. "Adequate enough, at any rate," he said, "so that our neighbors haven't complained."

EQUIPMENT . . . .

Underground Insulator: For insulation and protection of hot underground pipes, its new Gilsulate can't be beat, according to American Gilsonite Co. (Salt Lake City, Utah, and Elizabeth, N.J.). Its made of gilsonite, the resinous hydrocarbon similar in some respects to asphalt. The insulator, it claims, assures permanent protection against alkaline ground waters, electrolysis, root attacks and bacterial action. It also claims that Gilsulate is easier and cheaper to install than competitive substances. The Gilsulate insulator consists of three zones: the first is a semiplastic coating bonded to the pipe; the second, sintered particles, and the third, unconsolidated Gilsulate. The Gilsulate is simply poured into a shallow trench containing the pipe and tamped down, and the trench is backfilled. Gilsonite Co., which is jointly owned by the Barber Oil Corp. and Standard Oil of California, says tests conducted on the material by the Southwest Research Institute show that heat loss from a pipe covered with it is only 8-11% of the loss that occurs from bare, buried pipe.

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Two-Stage Evactor: At the 24th Exposition of Chemical Industries in Philadelphia next month, Croll-Reynolds Co. (Westfield, N.J.) will unveil a new, two-stage, noncondensing evactor. It uses steam at 10 lbs. (gauge) in the first stage and at approximately 34 lbs. (gauge) in the second. The second stage serves as both ejector and condenser. The feature, however, is in the steam stage, which permits vacuum down to a few millimeters (absolute) with steam at only 10 lbs. (gauge).

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Retractable Filter: Sparkler Manufacturing Co. (Mundelein, Ill.) is bringing out a new, heavy-duty retractable tank filter. Features claimed: it can be opened with all plates exposed in 60 seconds, can be cleaned by hand or by jet spray or backwashing or by a combination. One man, says the maker, can clean a 2,000-lb. cake and have the filter back in operation in half an hour. Tagged the MCR, the model is available in sizes ranging from 100 to 2,000 sq. ft. of filtering surface.

•

Grease Viscometer: Just out from the Technical Equipment Co. (Berkeley, Calif.) is a grease pressure viscometer for determining the viscosity of greases under varying shear rates and temperatures. It meets the requirements of A.S.T.M. D-1092, should prove useful, says the maker, in control and research labs as well as in the field.

•

Measuring Smoke: At the Air Pollution Control Assn.'s East Central Section meeting in Harrisburg, Pa., last month, a new instrument for indicating the density of smoke in stack effluent was described by Nelson Hartz of the Mine Safety Appliance Co. (Pittsburgh). Dubbed the Smokescope, it was developed by MSA's own laboratories, is intended to obviate the causes of errors MSA figures are inherent in other instruments used for the purpose.

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Changes Made: Mergers, new firms and new channels of distribution for old firms serving the process industries last week:

- Refinite Sales Co. (Omaha, Neb.) and the Elgin Softener Corp. (Elgin, Ill.) have merged, will be known as the Elgin Softener Corp.
- Process Plants Service, Inc. (Elizabeth, N.J.) has been formed to fabricate stainless steel process equipment, buy and sell used process equipment, make plant appraisals.
- Wm. C. Buchanan Co. (Houston) will be the new representative of the United States Gasket Co.

(Advertisement)

CHEMICALS OUTLOOK

October 1953

This news bulletin about Wyandotte Chemicals products and their applications is published to help keep you posted. Perhaps you will want to route these and subsequent facts to other interested members of your organization. Additional product information, through Wyandotte research and technical service facilities, and trial quantities of Wyandotte products are always available upon request. May we serve you?

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The now standardized Wyandotte-IBM system, containing over 10,000 cards indexing infrared spectra, has been turned over in a cooperative venture to ASTM . . . Wyandotte will continue to prepare the index cards and make the master deck.

ASTM provides a clearing house for information, and reliable, industry-wide machinery for future changes and improvements. For instance, IBM cards have proven valuable in handling X-ray defraction powder data, and ASTM, with the cooperation of Wyandotte, is now working on systems to index ultraviolet and visible absorption spectra.

For assistance in setting up an infrared laboratory, and for information about the Wyandotte-IBM system, write ASTM, Committee E 13, 1916 Race Street, Philadelphia, Pa.

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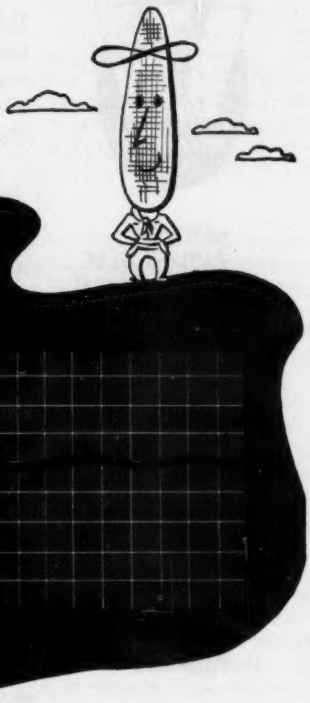

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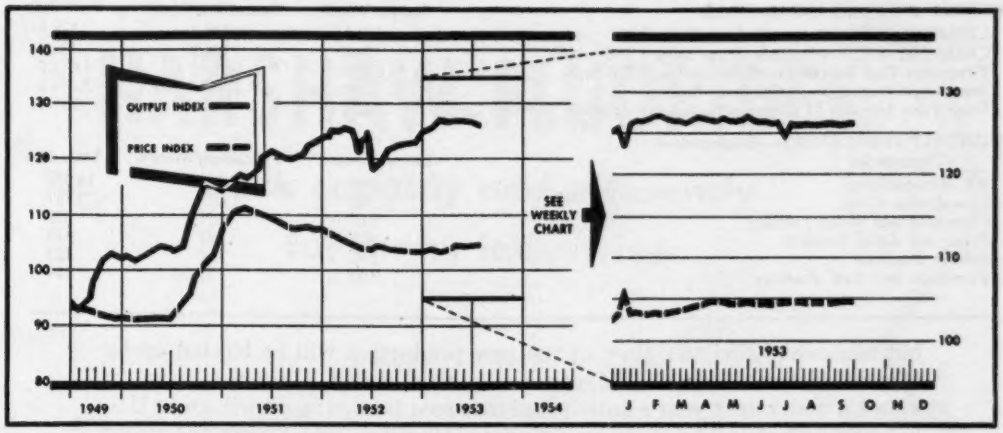

CW Index of Chemical Output—Basis: Total Man Hours Worked in Selected Chemical Industries
CW Price Index—Basis: Weekly Prices of Sixteen Selected Chemicals

MARKET LETTER

It's been an explosive week. And though the blows weren't specifically aimed at the chemical process industries, the impacts are being noticed in the nation's chemical market places.

Most serious, of course, is the current water-front mess that tied up practically all East Coast ports from Maine to Virginia. Chemical shipments, already beginning to pile up at shipping points, may make it necessary to brake production at some plants.

No balm either is the Assn. of American Railroads' embargo on rail movements of nearly all export and coastal freight into the New York Harbor area.

Not a few chemical makers with overseas customers, however, are diverting what cargos they can to New Orleans. Though the amounts are relatively small when compared with the tonnages normally leaving New York, the hope is that U.S. foreign customers will not turn to German, other European chemical producers—who are ready to move into any market breach.

•

Chemical buyers and sellers, too, are keeping a worried eye on another possible future headache. Railroads are facing some fancy pay increase demands from the four operating brotherhoods that could presage more delivery problems if an impasse should spawn a rail strike.

•

On the other hand, the present has a bright spot for most industrial alcohol users. Makers are not upping fourth-quarter price schedules despite the recent spate of increased price differentials for drum lots of many other solvents.

The ethyl alcohol market as a whole looks better. Producers, happy at current good-level demand, envision no letup at least through the remaining months of the year. There's enough material available to supply all customers, yet far less than would rate a "loose" tag.

But soon-due output from National Petro-Chemical's new 40-million gal./year synthetic alcohol plant (Tuscola, Ill.), has some trade experts predicting a definite softening in the market early next year. It's a good bet, though, that no huge surplus will materialize. Reasons are clear

WEEKLY BUSINESS INDICATORS	Latest Week	Preceding Week	Year Ago
CHEMICAL WEEK Output Index (1947=100)	126.4	126.3	122.5
CHEMICAL WEEK Wholesale Price Index (1947=100)	104.8	104.9	102.4
Bituminous Coal Production (daily average, 1,000 tons)	1,603.0	1,611.0	1,672.0
Steel Ingot Production (1,000 tons)	2,132.0(Est.)	2,149.0(Act.)	2,215.0
Stock Price Index of 13 Chemical Companies (Standard & Poor's Corp.)	246.0	243.6	241.4

MONTHLY INDICATORS—Employment (Thousands)	Latest Month	Preceding Month	Year Ago
All Manufacturing	13,817	13,644	13,069
Non-durable Goods	5,788	5,609	5,737
Chemicals and Allied Products	515	511	503
Paper and Allied Products	451	443	425
Rubber Products	216	214	203
Petroleum and Coal Products	190	191	191

but somewhat devious: Most of the new production will be blotted up by former fermentation alcohol consumers who would otherwise have to knuckle under next year's anticipated molasses famine; part will go to U.S. Industrial Chemicals, a division of National Distillers, which owns the major share of National Petro.

•

Market condition for phthalic anhydride—tight only a few months ago—may soon be headed for a complete flip-flop. Output from Barrett's comparatively new Chicago installation (at a reported 2½ million lbs./month rate), plus other producers' stepped up production has considerably eased consumers' problems.

But while makers are still moving a good volume of phthalic, settlement last week of the six-month strike at American Cyanamid's Bridgeville (Pa.) plant will add to sating of the market.

Upwards of 2 million lbs. of the material has been loaded and ready to go ever since the shutdown. Now—although the plant will not immediately resume full operations—the company can start hustling its phthalic.

It's still a big question mark, though, whether changing market conditions will also mean an altered price tag.

•

Some fatty acid derivative users, however, are paying less this week for their needs. Armour and Co. (Chicago), has notified customers of a general price reduction (ranging from 1 to 4¢/lb.)—on all products.

Reason advanced for the cuts: increased acceptance by the trade, which sparked a boost in production.

•

Expected price reductions in the nonferrous metals market is behind customers' current cautious buying. Copper users, for instance, see a softening when U.S.-Chilean talks (concerning U.S. stockpile purchasing) are completed. Chilean copper—at 30¢/lb.—will then become a market factor again.

Zinc sellers are also ruefully admitting that consumers are still shy despite the lower 10¢/lb. tag. Foreign material, at a penny/lb. less, could be a further price depressant.

SELECTED CHEMICAL WEEK MARKET CHANGES—Week Ending October 5, 1953

UP

	Change	New Price		Change	New Price
Methanol, synthetic, drms., c.l. East dlvd., gal.	$ .01	$ .45	Crude coconut oil, ref., ret. drms., l.c.l.	$ .01	$ .235
Methanol, synthetic, drms., l.c.l. West. dlvd. gal.	$ .025	$ .565	Tin, metal	$ .0075	$ .8275

All prices per pound unless quantity is stated.

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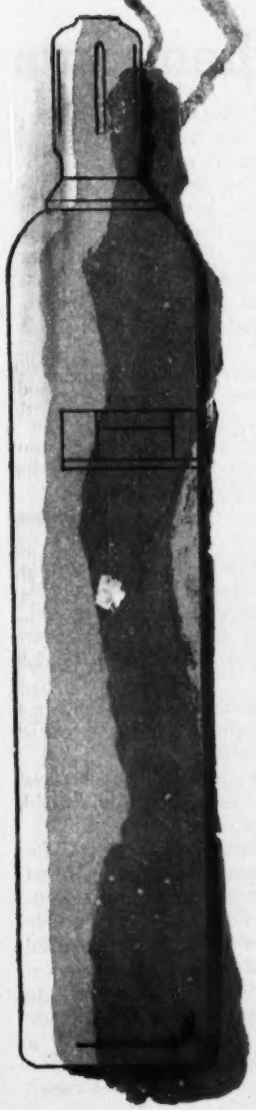

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- Boron Trifluoride Complexes
- Chromium Fluoride
- Fluoboric Acid
- Fluorine Cells
- Fluorinating Agents
- Frosting Mixtures
- Hydrofluoric Acid Anhydrous
- Hydrofluoric Acid Aqueous
- Hydrofluosilicic Acid
- Potassium Bifluoride
- Potassium Chromium Fluoride
- Potassium Fluoborate
- Potassium Fluoride
- Potassium Titanium Fluoride
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- Zinc Fluoride

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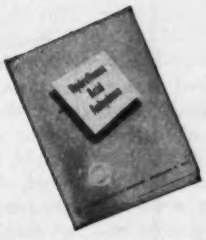

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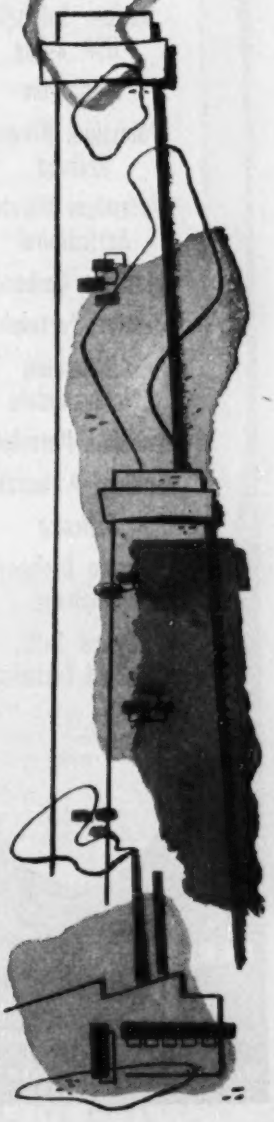

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AMMONIATED MOLASSES MARKET: Small now, but eyes are on the future.

Meat Market for Chemicals

It's a well-established axiom among chemical sellers—as well as most other product pushers—that markets are where you find them. Comparatively little known, however, is the scramble now going on for some very unusual areas of consumption—the rumens (first stomach) of certain animals like cattle, sheep, goats. And in the feed supplement field, a still unpushed newcomer, ammoniated molasses—recently patented by Commercial Solvents—will likely soon run neck and neck with older urea mixtures as both buck the market now dominated by natural (oilseed meal) feeds.

The minor contenders, of course, start out even. The essential fact about urea and ammoniated molasses is that these materials in the rumens of livestock are converted by the bacteria normally present into amino acids, which the animal then changes to meat—a complete protein.

On the basis of present evidence, both the urea and ammonia-spiked feed are substantially equivalent nutritionally. Marketers, therefore, see the what's-better battle settled on a future economic battlefield with ammunition that will include costs (handling, labor) and manufacturing techniques, as well as straight price per pound factors.

Molasses Preferred: Use of blackstrap molasses in cattle feed is not new. Livestock men have long found it an economical source of carbohydrates, and as an ingredient that imparts a palatability to feed that makes cattle clean it up in a hurry. That, of course, means more meat on the hoof. Molasses, too, is used as a preservative for silage and in the salvage of untasty roughages.

One nagging problem of the molasses industry has been the steady trend in alcohol production methods. Synthetic has all but relegated the molasses fermentation process to a far-in-the-back-seat spot, has concomitantly knocked off the syrup's prime outlet.

Now, however, molasses producers are looking to the farm and range as new, big-time users of their products. The addition of nitrogen in molasses to provide, at low cost, a high-protein equivalent feed may one day have some far-reaching results. Most significant:

- The problem of providing protein (most expensive, least available of the three principal food categories: carbohydrates, fats, proteins), to an ever-growing world population will be eased.
- Sugar-raising countries may become large-scale producers of cattle and dairy products.
- Molasses surpluses, which have plagued producers for years, would be nonexistent.

Urea in First: Back in 1944 the War Production Board, in an effort to combat the war-born protein shortage, induced Du Pont—then the only urea producer—to add the chemical to cattle feed as a nitrogen source. It was not difficult for Du Pont to comply, for the company had already tested, then temporarily shelved, a urea feed supplement process. Reason for shelving: then-scarce urea, com-

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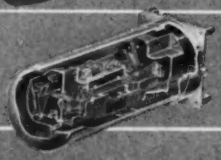

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batting another critical farm problem, was being gobbled up in fertilizers.

But the feed protein-source outlet, when compared with the mushrooming plastics demand over the past few years, has barely altered urea's end use pattern (*see table*). Even as late at last year only about 35,000 tons of urea was consumed by the nation's red meat supply.

1953 Urea End Use Pattern (est.)	
Plastics	65%
Fertilizer	25%
Other (including feeds)	10%

The plastics market, not feed, obviously lured Allied Chemical into urea production in 1950, a few other companies more recently. *

Chemically Does It: Unlike urea-molasses, which is a simple physical mixture easily formulated by the feed maker, ammoniated molasses is made by a controlled chemical reaction of cane molasses and anhydrous ammonia. The latter reacts with the invert sugar, yielding chemically combined nitrogen.

Commercial Solvent's product – brainchild of researcher Hugh Stiles– tradenamed Molatein, is generating a great deal of interest in some related fields.

The organization that has possibly the greatest hope for a widespread use of the ammoniated product – aside from the patent holder – is the Sugar Research Foundation (N.Y.). Earlier this year the group tabbed the new process as being of "great potential importance to the sugar, molasses, and cattle feed industries".

In a subsequent evaluation the foundation compared advantages of urea-molasses and ammonia-molasses, gave the nod in favor of the latter on a number of counts.

Prime advantage of ammonia over urea lies in some hard economic figures. Ammonia is the cheapest form of combined nitrogen, selling (at the time) for about 4¢/lb. A pound of nitrogen in the form of ammonia costs about 5¢. In the form of urea (selling at 5½¢/lb.), a pound of nitrogen costs nearly 12¢–some 2½ times as much as ammonia. Then too, the sugar people point out, ammonia is one of the starting materials for making urea (the other, carbon dioxide), so this cost advantage of ammonia seems permanent.

On the other hand, urea boosters are quick to point out there is little difference in going market prices of either type of feed supplement.

Then too, urea, a solid, is more

* W. R. Grace, Deere & Co., American Cyanamid (*CW, Dec. 13, '52*).

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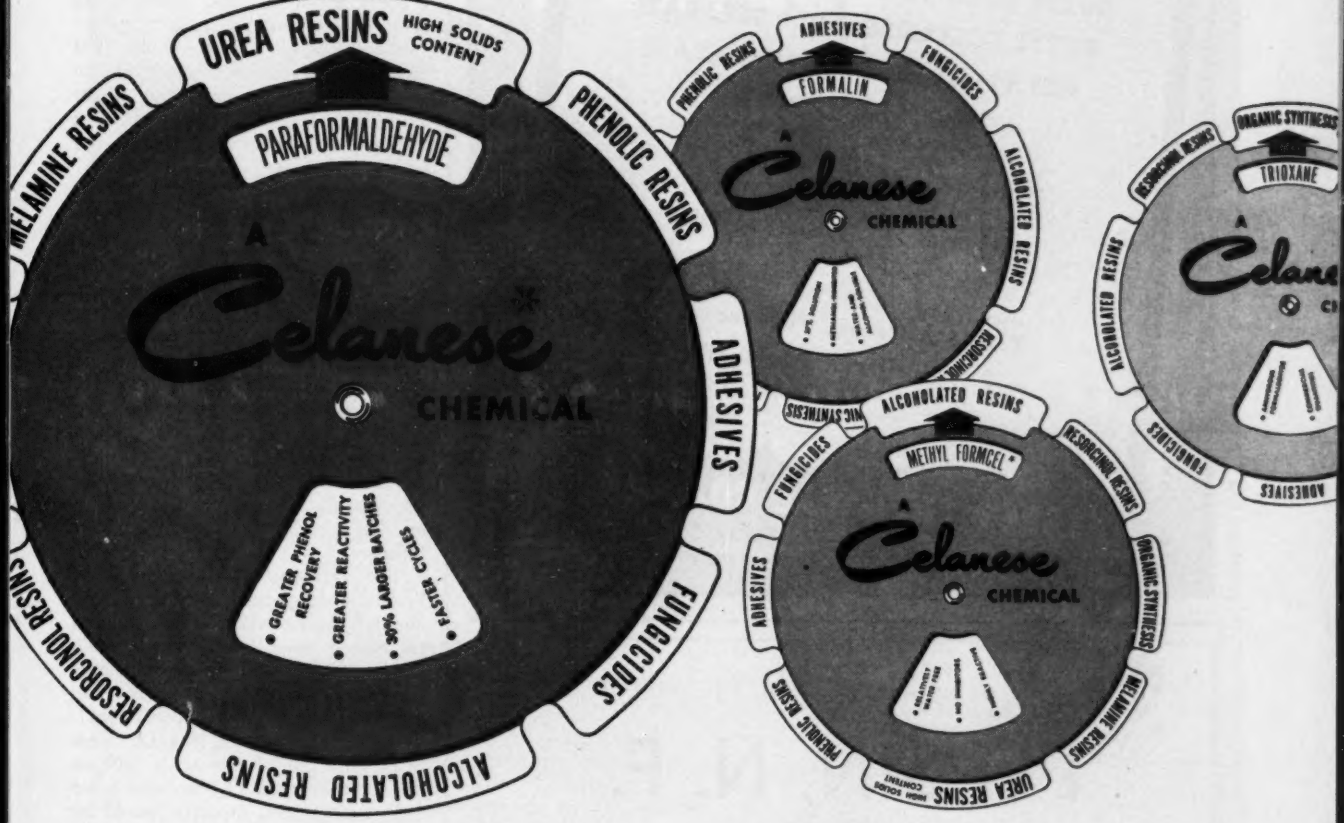

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readily shipped than ammonia, a liquified gas.

Commercial Solvents admits urea has the edge in some ways, but counters with a few potent rebuttals in favor of its baby. Prices at the moment are similar when figured on a nitrogen protein basis. The Molatein now being marketed is only a 15% product, but plans in the works will likely offer a higher-protein-level ammoniated molasses—and the Sugar Foundation indicates a maximum of 36%—at a more attractive price per unit of protein.

Most telling shot: shortages, chronic with urea, happen less often with ammonia.

Scramble for What? Both factions agree on one vital fact, however. Natural feed will continue to hog the major share of the market, at least for the next few years. Basic reason: raw material supply. For instance, the U.S. annually produces some 84 million tons of corn. About 85% of that amount, or more than 70 million tons, is fed to stock. Compare that with the approximately 2.5 million tons of molasses that occasionally worries the sugar industry.

The high-protein requirement of beef and dairy cattle is estimated at about 6 million tons/year (converted to oilseed meal basis, 44% protein level). While both urea and ammonia currently contribute probably less than 200,000 tons (nitrogen equivalent), the fact remains that if either were to capture only a minuscule 10% of the protein market, observers point out, present urea capacity would be inadequate to supply the feed field alone, much less the growing plastics and fertilizer demands.

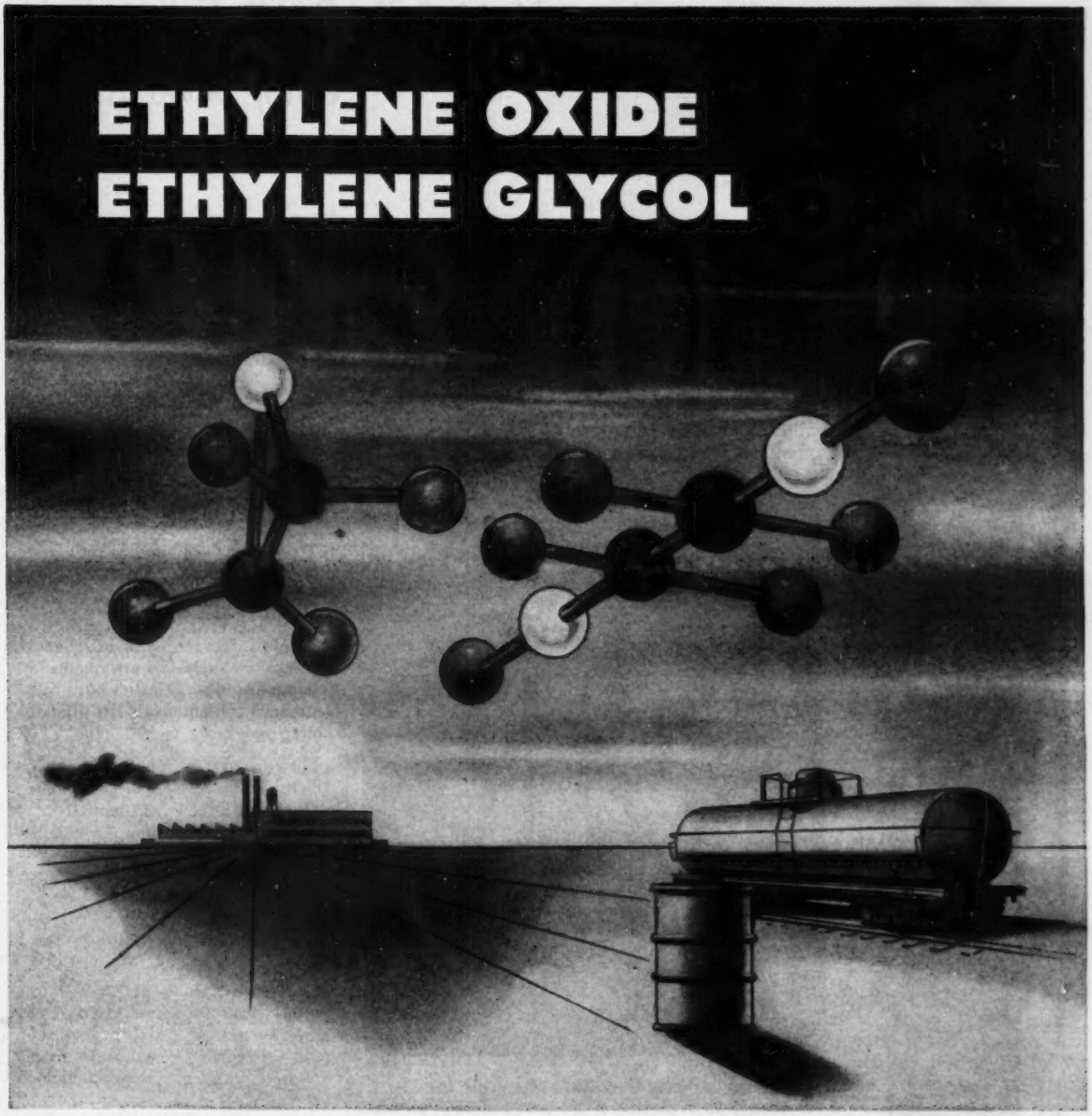
And substitutes for the ammoniation base—cane juice, acid-hydrolyzed bagasse, furfural by-products,* citrus molasses, among others—would be required to supplement supply-short blackstrap molasses.

More Nitrogen, More Meat: A not-indifferent spectator at the feed supplement race is the U.S. Dept. of Agriculture. The government is firmly convinced that the need for agricultural nitrogen will be so great—as population increases, food lands diminish—that there is room for any and all methods that will up the nation's food supply.

And though neither urea nor ammonia is likely to do it soon, it's a cinch both will eventually contribute to the protein on the family dinner table.

* Quaker Oats shares an ammoniation process with Commercial Solvents.

ETHYLENE OXIDE
ETHYLENE GLYCOL



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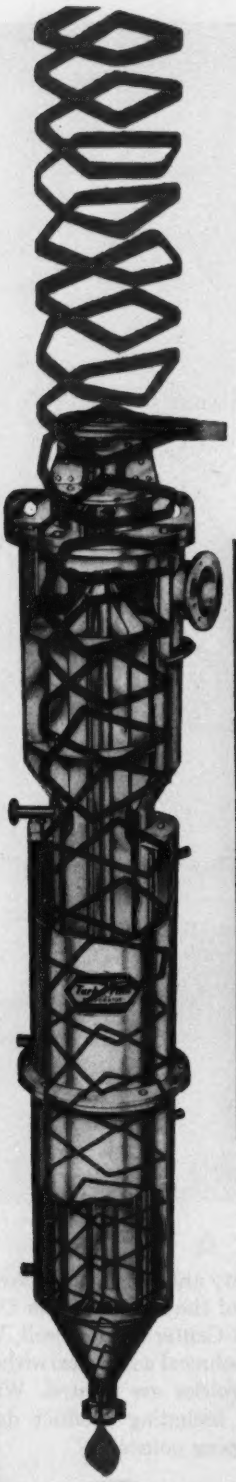

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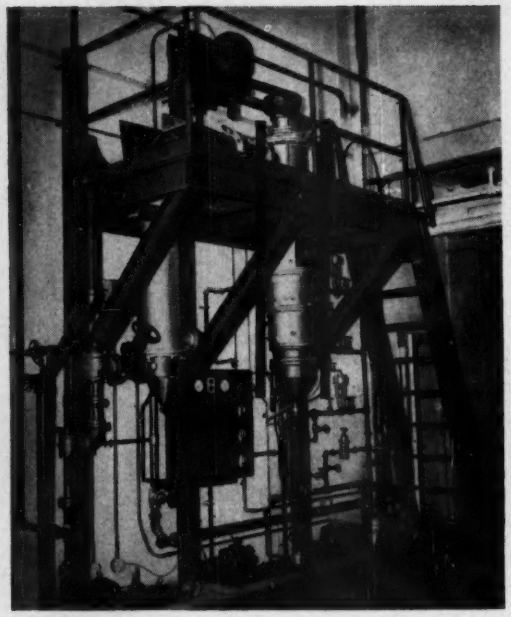

Installation picture shows the Turba-Film Evaporator, Model No. 2, with capacity for evaporation of 300 pounds of water per hour at 27" vacuum and 30 p.s.i. steam. Vacuum and steam pressure can be higher or lower at will. Also available are a laboratory unit of 40-pounds-per-hour capacity for trial runs in your own plant and larger models as high as 2500 pounds per hour capacity.

Cutaway figure shows rotor blades running full length of the Turba-Film Evaporator. Material enters at narrow part of the assembly on the indented rotor blades. These convert it to a thin liquid film which is processed during the few seconds required to descend on the walls of the evaporator. Droplets entrained in rising vapor are separated by the blades of the upper section and drop to the heated processing zone below.

*Turba-Film is a trademark of the Rodney Hunt Machine Co.

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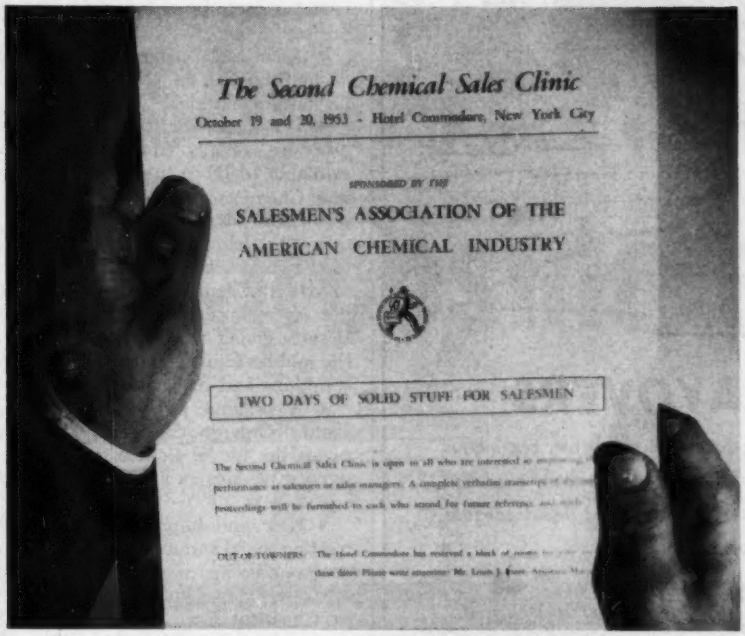
The Second Chemical Sales Clinic
October 19 and 20, 1953 - Hotel Commodore, New York City
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TWO DAYS OF SOLID STUFF FOR SALESMEN

SALES IMPROVEMENT: To those interested, an invitation.

Seminar on Selling

SAACI's second sales clinic, beamed at chemical salesmen and their bosses but open to all, begins a two-day run in New York next week.

Highlights of this year's sessions: rifle-shot topics and more of them; an estimated double-1952's attendance. Purpose: to spur more creative salesmanship, market alertness.

At 10 a.m. sharp on October 19, at the Hotel Commodore, New York, the Salesmen's Assn. of the American Chemical Industry will get its second chemical sales clinic into action.

With the lure of "two days of solid stuff for salesmen" SAACI is opening its clinic "to all who are interested in improving their performance as salesmen or sales managers"—members and nonmembers alike.

At first glance, the promise held out by the clinic appears ambitious. SAACI President Robert Milano and Clinic Chairman Ralph Ericsson,* however, assure CW that the agenda was drawn up to fill an urgent need for today's chemical salesman.

Revalue: Milano views the clinic as an opportunity for a salesman to revalue himself. After years of complacent order-taking, the average representative inexperienced in a buyers market will do well, he says, to take stock of himself, jar out any accumulated smugness. The clinic can effect the jarring in a relatively painless manner, he believes.

Ericsson, who is chairmanning the session for the second time, considers the SAACI effort a custom-tailored service for chemical salesmen. Nowhere else, in Ericsson's opinion, will you find a course concerned with the day-to-day job of selling, especially one that's oriented toward the conditions peculiar to the chemical industry.

Unique: Both Milano and Ericsson believe that the clinic is in a unique position to render services that, because of their nature, are otherwise hard to come by.

- Few sales managers, they contend, are qualified pedagogues, even if they should have the time or inclination to teach.
- Company relationships—issues involving both the salesman and his boss—ordinarily aren't aired openly. At the clinic, free and open discussion of these topics will be encouraged.

Change in Emphasis: One of SAACI's avowed goals, incorporated into its constitution and by-laws, is "to increase selling efficiency and to foster . . . the highest sales ethics."

Elaborating upon this aim, Ericsson spells out what he considers three principal tenets justifying the clinic:

- Imaginative, creative salesmanship is essential to the continued growth and health of the chemical industry.
- Suppliers need to take a larger part in finding uses for their products, remembering that the salesman is the connecting link bringing suppliers and consumers together; he must be adequately trained for this job.
- Selling in the chemical industry must be made a recognized and respected profession, attractive to the coming generation, stimulating to the kind of men needed.

To those familiar with the social stamp of past SAACI functions, the change in emphasis to the service point of view is a sharp contrast.

Milano and Ericsson play down the suddenness of the switch, however. They recall that for several years the idea of a clinic had been growing, but because the economic time was not ripe, SAACI members were preponderantly apathetic to the idea.

Now and Then: There's a sharp contrast in attitude toward last year's meeting and the feeling about the coming session. According to Ericsson, last year's approach was frankly skeptical; this year it's enthusiastic.

Program for this clinic will be pitched differently, too. Last year the programmers had little to guide their efforts. Ericsson describes it as a "pilot run", exploratory in nature.

This time, as a projection of last year's pilot data, the topics are beamed more sharply on live, up-to-the-minute sales problems. Example: salesmen's compensation, touched upon in the previous session, evoked a deluge of questions. Next week, an entire discussion will be devoted to the topic.

And in at least two other respects the coming session will mark a step-up from last year's "pilot run":

- The verbatim transcript of the 1952 proceedings, furnished to each participant, ran some 128 pages. This year's will likely require over 200 pages.
- Last year's attendance totaled some 250 salesmen and managers. This time, based upon latest registration returns, the committee is planning for twice that number.

* To whose attention reservations should be sent. Address: 6 East 45th St., N.Y. 17.

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published weekly at Philadelphia for October 1, 1953

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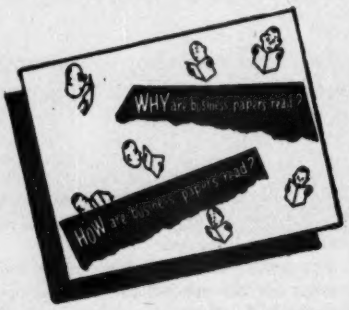
[Seal] ELVA G. MASLIN
(My commission expires March 30, 1954)



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McGraw-Hill Publishing Company, Room 2710, 330 West 42nd St., New York 36, N. Y.

DISTRIBUTION . . . .

For the Bookshelf: Here are some recent products from industry printing presses:

• American Cyanamid Co. offers a 27-page booklet on "The Chemistry of Cyanuric Chloride."

• "Eastman Services," a 20-page brochure, details laboratory services available to those interested in Eastman Chemicals Products' line of industrial chemicals.

• To celebrate its 75th anniversary in the industrial chemical field, Consolidated Chemical Industries, Inc., has issued a new 104-page catalog. Besides giving the company's history, the publication contains product descriptions and packaging information.

• A bulletin published by Monsanto's Organic Chemicals Div. explains the use of Benthal in the production of short and medium oil alkyd resins.

• New and improved methods of treating metal surfaces with peroxygen compounds are described in Bulletin #51 just printed by the Buffalo Electro-Chemical Co., Inc. (Buffalo). It supersedes one published last year on the same subject.

• Commercial Solvents Corp. now lists a descriptive chart titled "Industrial Chemicals and Market Development Products."

•

Selling Manual: A book on selling by Fred de Armond has been published by Lloyd R. Wolfe, 111 West Washington St., Chicago 2, Ill. It's titled "Ten Trails to Sales"; price is $3.50 plus postage.

•

Products Added: Glyco Products Co. (Brooklyn) is producing ethylenediamine tetraacetic acid and its salts at its Williamsport, Pa., plant.

• A new powder form of Cellosize hydroxyethyl cellulose is now being offered by Carbide and Carbon Chemicals Co. It's available in two viscosity types—Cellosize WPHS and WPHS-Low.

•

New Building: Sharp & Dohme is constructing a branch office and warehouse building at 5945 N. Rogers Ave., Chicago. It will supersede the present branch building at 111 North Canal St.

•

Wilmington Office: Monsanto's Organic Chemicals Div. plans to open a district sales office in Wilmington, Del., about Jan. 1. The office will be located at Governor Printz Blvd. and Edgemoor Rd., will be managed by Daniel Murphy, now resident salesman at Milwaukee, Wis.

sodium-N-lauroyl sarcosinate

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Yes, this new anti-enzyme for dentifrices, which has excited the scientific world because of its ability to prevent tooth decay, is now commercially available from Antara under the trade name, "Medialan LL-33."

Antara is the oldest commercial supplier of sarcosinates in the United States, having produced them from several fatty acids since before 1937. Sodium-N-lauroyl sarcosinate has been recognized as an excellent detergent and foaming agent for toothpaste since 1936. With proper purification and formulation it can halt tooth decay, according to tests sponsored by leading toothpaste manufacturers.

Antara is not in a position to claim therapeutic properties for the sarcosinates, since tests on the chemical and its dentifrice formulations were conducted by others. Antara further points out that its use as a therapeutic agent classifies it as a drug subject to FDA regulations.

Antara has available the following MEDIALANS for commercial and experimental use:

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Medialan LL-99	Sodium-N-Lauroyl Sarcosinate	Purified Powder	Experimental
Medialan LL-33	Sodium-N-Lauroyl Sarcosinate	Purified Solution	Commercial
Medialan LL-42	Sodium-N-Lauroyl Sarcosinate	Tech. Gr.-Slurry	Commercial
Medialan LP-41	Sodium-N-Oleoyl Sarcosinate	Tech. Gr.-Slurry	Commercial
Medialan LT-52	Sodium-N-Stearoyl Sarcosinate	Tech. Gr.-Paste	Commercial

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IN CANADA: Chemical Developments of Canada Limited, Montreal

How to cash in on new types of fatty alcohols

More and more chem-men in the processing industries are looking into today's new uses for fatty alcohols. Lab workers have long known how to put the interesting properties of cetyl, oleyl, and stearyl alcohols to work in rubber, oil, paper, wax, ink, and soap products (among others). *It takes the low prices of technical grades of* CACHALOT *brand fatty alcohols to make these uses profitable as well.* Technical, USP, NF—*all* grades of CACHALOT are held to close tolerances by vacuum distillation. Whether you buy a few hundred pounds or a carload, youll find each delivery uniform. This team-up of low prices and high uniformity makes CACHALOT the brand of fatty alcohols that is re-ordered. For the booklet on "Possibilities", write *M. Michel and Company, Inc., 90 Broad Street, New York 4, N. Y.* Basic suppliers to chemical manufacturers for over twenty-five years, their trade name for fine fatty alcohols is

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WEEKS AND FRIENDS: "Realistic to recognize 'soft spots'."

Selling Facts

In the selling game, where persuasiveness is usually at a premium, participants who pride themselves on their simon-pure objective approach would seem to be out of their element. As was convincingly demonstrated last week, this conclusion is not necessarily valid.

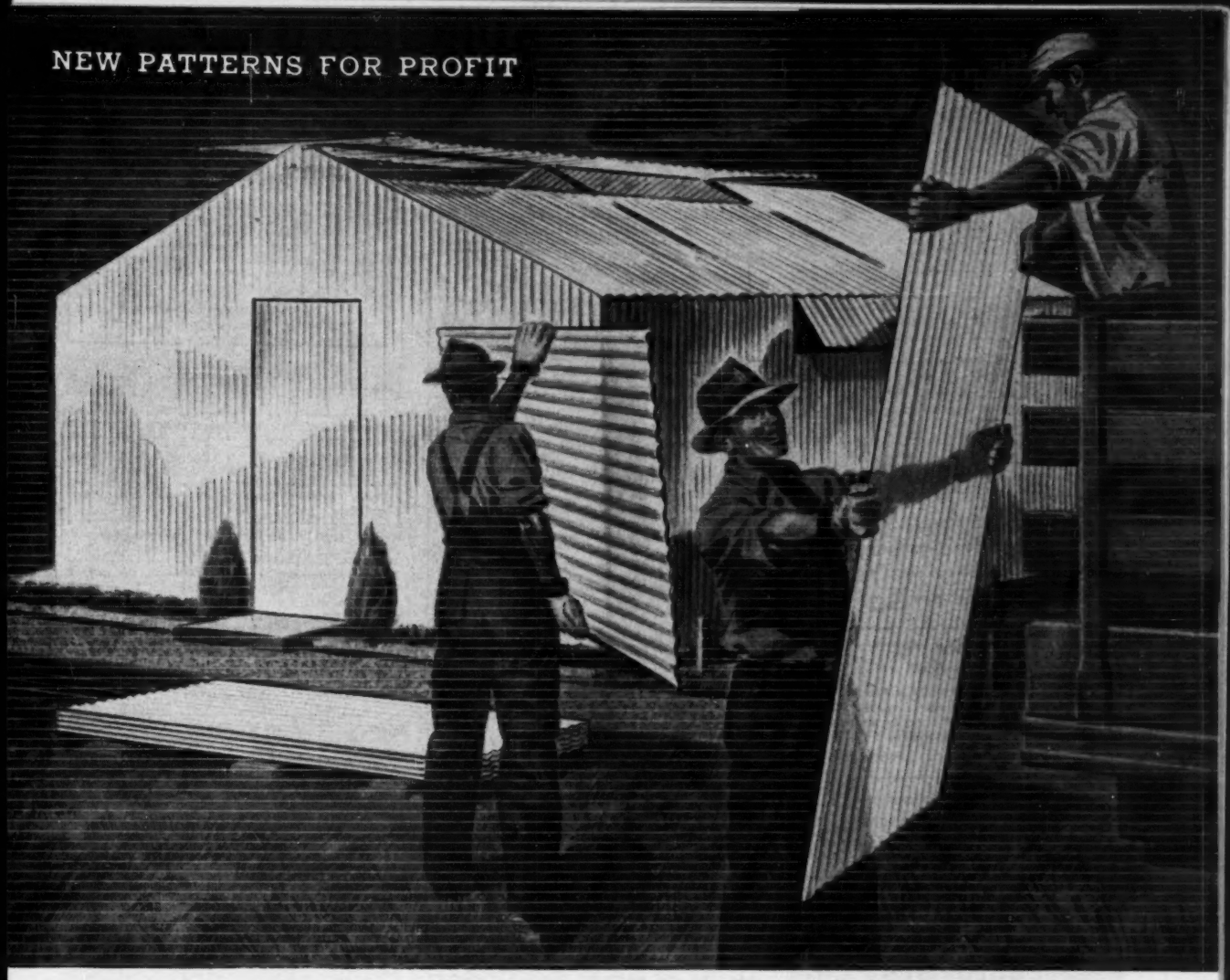
That the great emphasis in the chemical (as well as other) industries today is on selling is common knowledge. Knowing this any sales manager worthy of his keep is tightening up his efforts for the sales race ahead. That he concerns himself with this matter is no cause for surprise; he's only doing what is normally expected of him.

But it's news when a staid, conservative, strictly fact-finding institution decides it's time to talk about selling. And that's just what happened last week.

For three days, 2,500-plus sales-

HUDDLE: NICB trustee chairman Williams, Pres. John Sinclair, Commerce Secretary Weeks.

NEW PATTERNS FOR PROFIT



Will Construction of Shatterproof Greenhouses Add New Zip to the Building Boom?

Something new is ready for an old business: shatterproof plastic panels for commercial and private greenhouses.

The "clear" translucent panels transmit 80-90% as much light as pure air. They are weather-resistant and strong . . . will support 150-175 lbs. on 24" centers. Hail or baseballs just bounce off! The panels won't rot, boring insects and termites do not attack the material. And most important, greenhouse maintenance is cut to the vanishing point.

Greenhouse operators who "pioneered" with reinforced plastic greenhouses report surprising results: Because of *diffused* light, leaf burn is controllable; shade-loving and sun-loving plants grow well side-by-side.

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Commercial greenhouse manufacturers can capitalize on the huge replacement market among commercial growers.

If you're in the building business (or if you'd like to build a greenhouse) send 25 cents in coin or stamps for the detailed, illustrated plan of the 16' x 24' greenhouse shown in the illustration. The speed and ease of construction will give you lots of ideas on how you can use these panels, PLUS a ready-to-use greenhouse plan. Except for four 2" steel pipe corner supports in 12" concrete footings, it is entirely aluminum and reinforced plastic. The greenhouse is expandable in any direction, reduces framing at least 25%, and requires no concrete or wood sills — because the reinforced plastic panels go right into the ground.

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Agricultural Chemicals Export—Staff Assistant wanted. Man between 25 and 35. Require a competent sales correspondent to act as assistant to the Export Manager, Agricultural Chemicals Division. Must have background in export sales of agricultural chemicals. Knowledge of Spanish essential. Location New York. Please send complete information to P-9301, Chemical Week.

Wanted: Graduate Engineers, preferably chemical, for both Consulting and Field Sales Work. For Sales, should have 3 or more years successful record. For Consulting, young men preferred so that our business can be taught to them and they can move up in years to come. P-7866, Chemical Week.

WANTED

Business Administration graduate

with chemical industry cost estimating experience for planning team of well-established, growing company. This man will (1) have proved himself in his present job; (2) be looking for additional responsibility; (3) be between 30 and 48. Resume held in confidence. Reply to

P 9410 Chemical Week
330 W. 42 St., New York 36, N. Y.

Positions Wanted

CHEMISTS AND ENGINEERS
(POLYMERIZATION)

Research, development and pilot plant group of well established company requires chemists and chemical engineers with background in vinyl and diene polymerization. Experience desirable but not essential. Openings exist for three (3) men with salary ranges to $10,000/year depending on experience. N. E. location. Submit complete resume to:

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W. Alec Jordan, Editor
CHEMICAL WEEK
330 W. 42d St., New York 36, N. Y.

WANTED

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P 9378 Chemical Week

330 W. 42 St., New York 36, N. Y.

DIRECTOR OF PRODUCT INFORMATION

Leading Manufacturer industrial, fine and reagent chemicals needs Director of Product Information with some experience to develop bulletins and other publications, make occasional customer contacts as technical representative of sales department, and give technical approval to advertising copy. Send resume and salary requirements to Personnel Division, J. T. Baker Chemical Co., Phillipsburg, N. J.

Unusual opportunity for man with technical manufacturing knowledge of re-inforced plastics such as glass and polyesters, etc. Take complete charge of new proposed division located in Essex County, N.J. P-9417, Chemical Week.

Selling Opportunities Offered

Wanted—Technically educated chemical product salesmen (1 for the N.E. territory and 1 for the S.W. territory). Sales experience preferred. Must be aggressive and able to analyze markets. Give complete sales and personal history, and salary expected, together with recent snapshot. Marathon Corporation, Chemical Division, Rothschild, Wisconsin.

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DISTRIBUTION . . . .

minded executives attended the 342nd meeting of the National Industrial Conference Board, held in New York's Waldorf-Astoria hotel. Subject of the meeting: "Better Profits Through Better Selling."

Besides drawing one of the largest audiences in its 37 years' existence, the occasion of NICB's meeting was significant in two other respects:

- It was the first three-day conference ever conducted in the history bof the board.
- It was the first regularly scheduled general session for all associates ever to be concerned with one specific topic.

Because NICB takes great pains to maintain its reputation for impartiality and no-propaganda methods, no NICB spokesman would interpret the data that led to the calling of the full-dress sales conference.

However, this much was admitted: selling is management's number-one problem today. And Clark Thompson, director of NICB's Division of Business Practices, and who inspired the conference, had this to say:

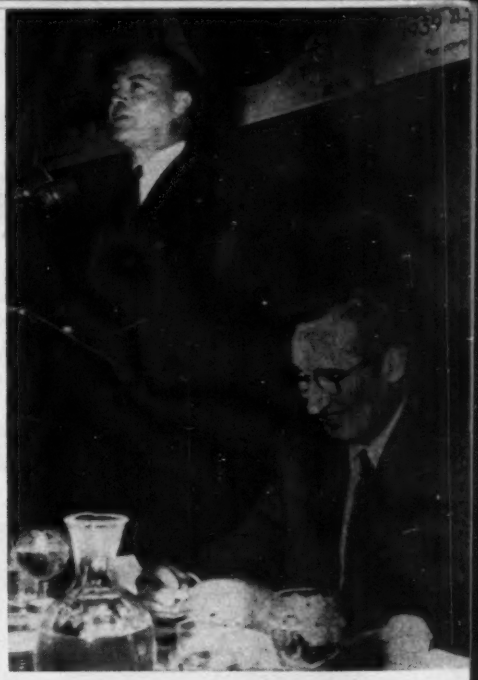
"We didn't arrive at the decision to hold this meeting from any single consideration. It was a matter of adding up the results of surveys, personal contacts, correspondence and field work to come to this conclusion.

"One incidental straw-in-the-wind, for example, was the increase in requests for our six-year-old study, 'Measuring Sales Performance.'"

For the Record: In the course of the more formal dinner and luncheon sessions, attenders heard several government and industrial leaders' opinions on current marketing problems.

- Secretary of Commerce Sinclair Weeks reminded his audience that "the economic climate today is good." While admitting "it is realistic to recognize 'soft spots,'" Weeks contended that "it is also realistic to recognize all the facts, including the fact that our over-all economy is in sound health . . ."
- Melvin Baker, chairman of the board, National Gypsum Co., delineated the prime business problem as "one of fear—worry that production is likely to be reduced." In his opinion, "the consumer can save the day if we persuade him to buy." Baker confidently assured his listeners that "through the pooling of top-flight talent . . . the problems can be successfully met."
- Agreeing in spirit with the other speakers, William Stolk, American Can Co. president, told his hearers, "The big question [in preventing a recession] we must recognize and face up to first is: 'Can we relearn to sell?'"

In reply to his own question, Stolk opined that American industry will prevent serious recession if companies provide [their] sales forces with all-out support in terms of quality, price and service."



STOLK AND NICB BOARD CHAIRMAN COLA PARKER: "Can we relearn to sell?"

Work Sessions: If the postprandial speakers provided instructive relaxation to the NICBers, it was the round-table sessions that tasked them to apply themselves to the conference subject matter.

Over the three-day run, associates had the opportunity to participate in as many as five discussions on such topics as: Selecting and Training Sales Supervisors and Executives; Fundamentals of Salesmen's Compensation; Measuring the Efficiency of Salesmen.

Of particular interest to the chemical process industries was the high percentage (over 25%) of chemical executives among the 58 chairmen and panel members comprising the 11 sessions.

Off the Record: The round-table meetings were conducted as strictly closed sessions. According to Thompson, the speakers were polled in advance on the question, overwhelmingly voted to keep the meetings "off-the-record." Their reasoning: the give-and-take of opinions might be less inhibited and therefore possibly more fruitful.

What Fruit? Aware that NICB's *raison d'etre* is fact-finding and dissemination, CW queried Thompson on what new information would stem from the meeting.

With characteristic NICB objec-

CHEMICAL WEEK • ADVERTISING INDEX

OCTOBER 10, 1953

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tiveness, Thompson's reply was noncommittal. This much he did volunteer, however:

• In the few work hours of analysis of the meeting transcript, his staff had already combed some 42 ideas worthy of further investigation.

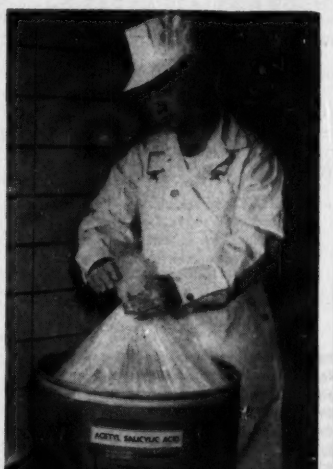
• Updating of the much-in-demand six-year old "Measuring Sales Performance" study would proceed apace.

•

West Coast Offices: Plax Corp. (West Hartford, Conn.) has opened a West Coast office at 4501 S. Santa Fe Ave., Los Angeles, with Richard Hall as head. To service the San Francisco area, Walthall Turner, assistant to Hall, will establish headquarters at 300 Seventh St., San Francisco. Warehousing facilities have been leased in both cities.

•

In Progress: General Dyestuff Corp. is consolidating its Boston and Providence sales offices under one roof at the company's present location, 85 Tockwotton St., Providence, R.I. The move is intended to increase the company's technical, sales and warehouse facilities in the New England area.



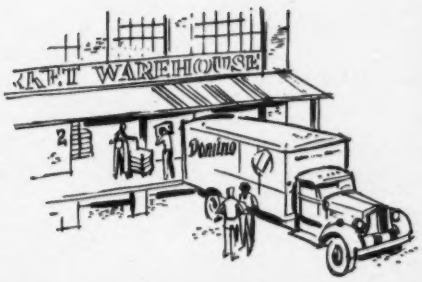
Water Barrier

ANTIMOISTURE protection for hygroscopic chemicals packed in standard fiber drums is no longer a problem, says Dow Chemical Co. Its solution: store in (Dow-made) saran liners.

Testing the lining material on moisture-loving, water-sensitive starch formulations of aspirin, Dow claims that after four and one-half years study, it is convinced that the new liner is the answer.

DOMINO SUGAR'S experience:

Multiwall bags make good carriers for retail units



The American Sugar Refining Company has for years been using Multiwall bags as shipping containers for shelf size packages of Domino sugar.

Union Bag was one of the first to supply paper bags for packaging sugar, and now manufactures Multiwalls for use as shipping containers for retail units of a wide variety of products.

Union's Packaging Service Department carries on a continuing research and testing program. Perhaps it can show you either a new use for low-cost, efficient Multiwalls in your business or suggest additional economies in your present Multiwall bagging operation. Why not check on this helpful service this week?

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